

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.



WATER SUPPLY OUTLOOK FOR OREGON

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

OCT 6 1969

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE--SOIL CONSERVATION SERVICE

and
OREGON STATE UNIVERSITY

and
STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

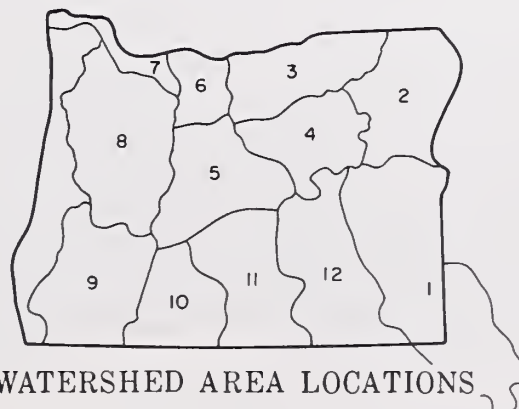
AS OF
MAY 1, 1969

TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
AUTOMATIC SNOW STATIONS.....	3, 4, 5 AND 6
STORAGE STATUS OF OREGON RESERVOIRS.....(MAP).....	7
MOUNTAIN SOIL MOISTURE IN OREGON.....(MAP).....	8
VALLEY PRECIPITATION IN OREGON.....(MAP AND TABLE).....	9
CURRENT OREGON STREAMFLOW.....(GRAPH).....	10

DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....INSIDE BACK COVER	



WATER SUPPLY OUTLOOK for OREGON

May 1, 1969

The 1969 water supply outlook for Oregon ranges from near average to much above average. Warm temperatures during the first half of April caused a rapid melt of the snowpack and streams responded with high volume flows. Stored water in most reservoirs throughout the State is now above average.

SNOW COVER

The snowpack is nearly gone in eastern Oregon because of the warm temperatures early in April, and remains only at the highest elevations. An exception is on the upper Grande Ronde and in the Wallowa Mountains where near average snow cover exists. Snow cover is still above average in the Cascades and varies from 110 percent in the central part up to 135 percent of average in the north, around Mt. Hood.

PRECIPITATION

April precipitation, as reported by the U. S. Weather Bureau, was below normal in Central Oregon and in Malheur County. Near average amounts were received in the Willamette and Rogue-Umpqua Basins and in Harney County. The northeastern part of the State recorded rainfall 120 to 145 percent of normal.

RESERVOIR STORAGE

Excessive April streamflow provided excellent inflow to reservoirs and, as a result, stored water supplies are currently 111 percent of average. Twenty-five reservoirs contained 2,792,500 acre feet of water on May 1. This is 88 percent of total usable capacity.

continued on next page

continued--

STREAMFLOW

April streamflow, as reported by the U. S. Geological Survey, was excellent in most areas of Oregon and varied from near average in the Rogue-Umpqua watersheds up to 433 percent of average on the Owyhee.

Selected volume streamflow forecasts in acre feet are as follows:

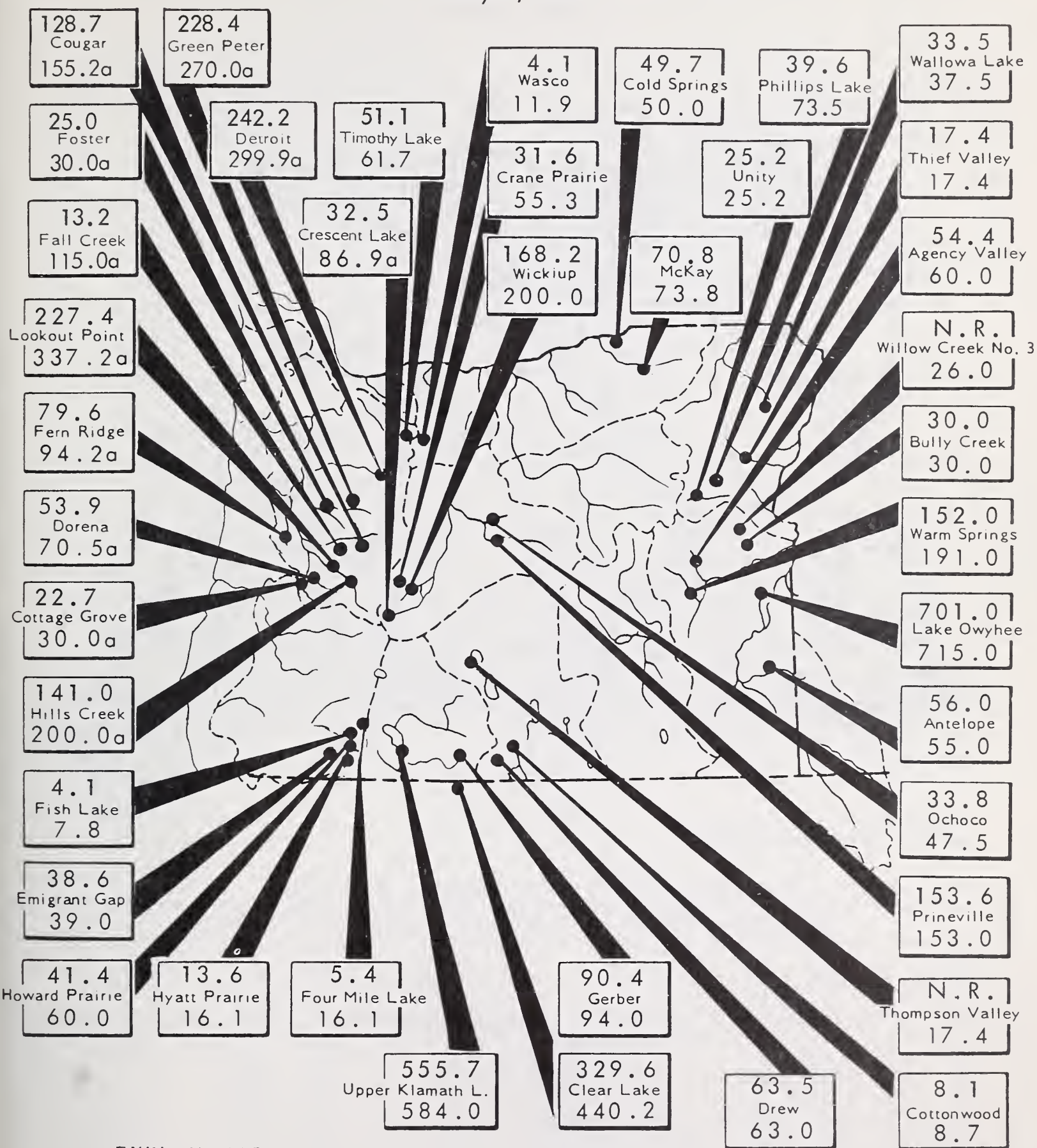
<u>Stream</u>	<u>Period</u>	<u>Forecast</u>	<u>% 1953-67 Avg.</u>
Owyhee net Inflow	May-Sept.	200,000 a.f.	112
Grande Ronde at La Grande	May-Sept.	108,000 a.f.	103
Umatilla at Pendleton	May-Sept.	88,000 a.f.	110
Deschutes at Benham Falls	May-Sept.	425,000 a.f.	83
Hood near Hood River	May-Sept.	319,000 a.f.	131
Mid. Fk. Willamette blw N. Fk.	Apr.-Sept.	898,000 a.f.	108
Rogue at Raygold	May-Sept.	719,000 a.f.	105
Upper Klamath Lk. net Inflow	May-Sept.	420,000 a.f.	109



STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

May 1, 1969



EXPLANATION

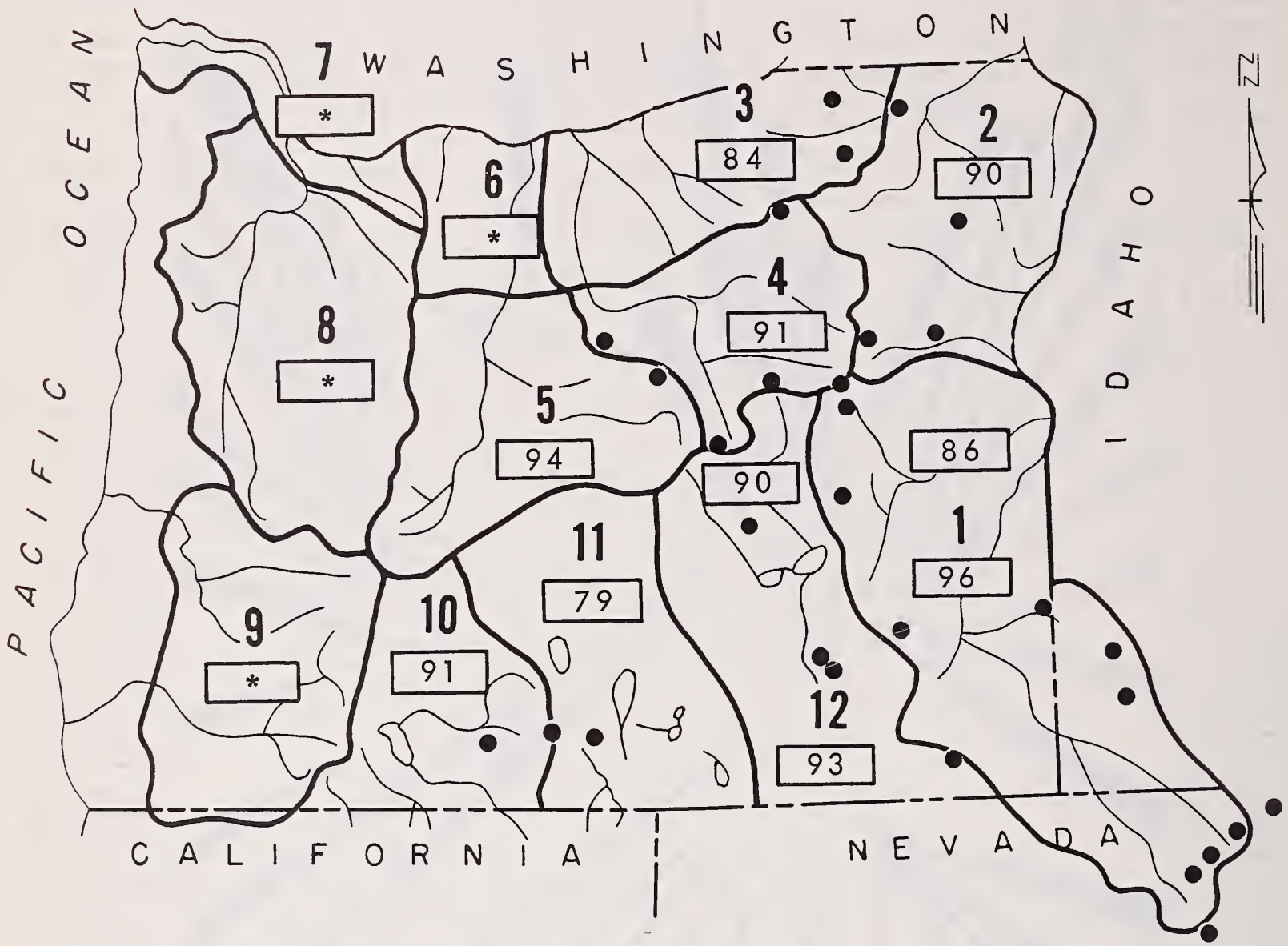
687.0	---	Contents
Lake Owyhee		
715.0	---	Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.

N. R. - No report.

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

May 1, 1969

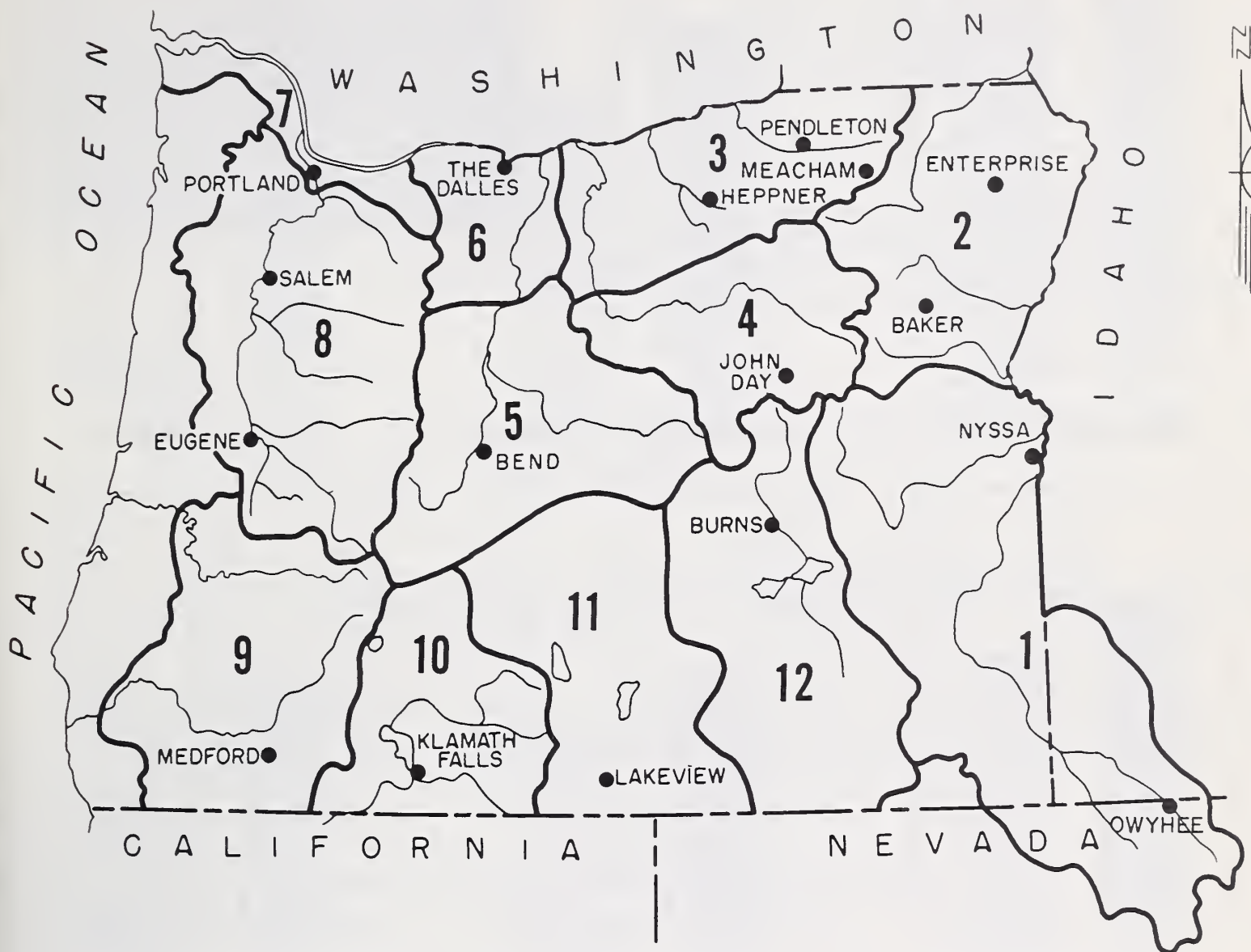


● Soil Moisture Station

**Moisture studies not yet developed in these areas.*

VALLEY PRECIPITATION in OREGON ^a

May 1, 1969



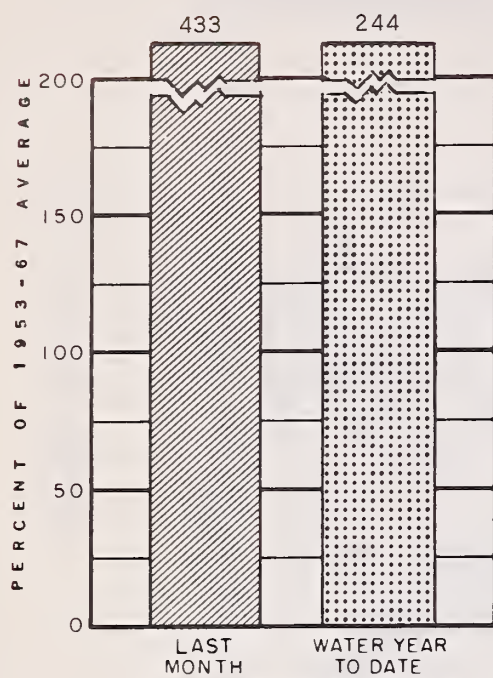
PRECIPITATION as PERCENT of the 1953-67 AVERAGE

STATION	LAST MONTH	WATER ^b YEAR TO DATE	STATION	LAST MONTH	WATER ^b YEAR TO DATE
Baker Apt.	170	129	Lakeview	74	115
Bend	46	73	Meacham	122	95
Burns	58	112	Medford Apt.	54	83
Enterprise	105	95	Nyssa	131	129
Eugene Apt.	116	126	Pendleton Apt.	192	127
Heppner	136	127	Portland Apt	100	120
John Day	149	146	Salem Apt.	100	115
Klamath Falls Apt.	115	91	The The Dalles	63	108
			Owyhee (Nevada)	46	124

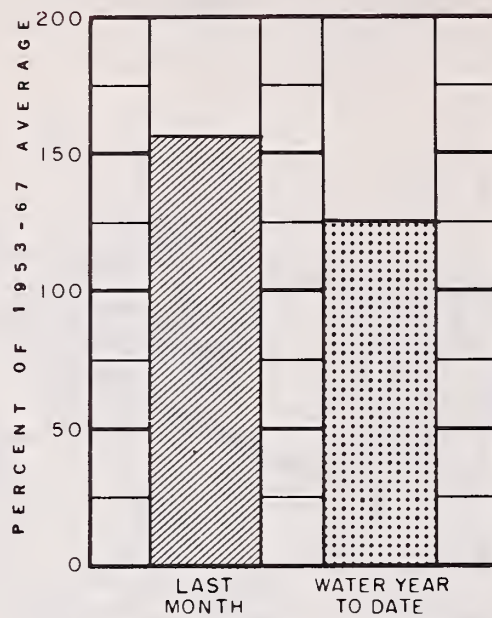
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

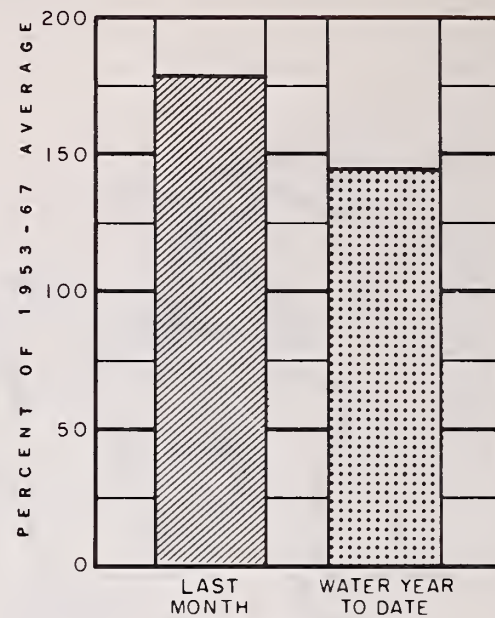
May 1, 1969



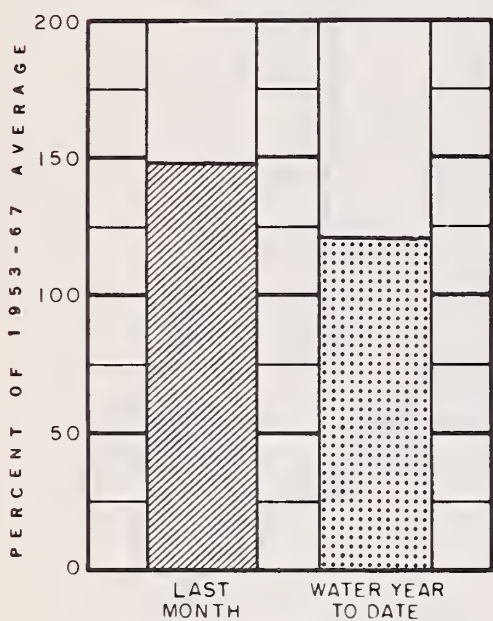
Owyhee Lake net inflow



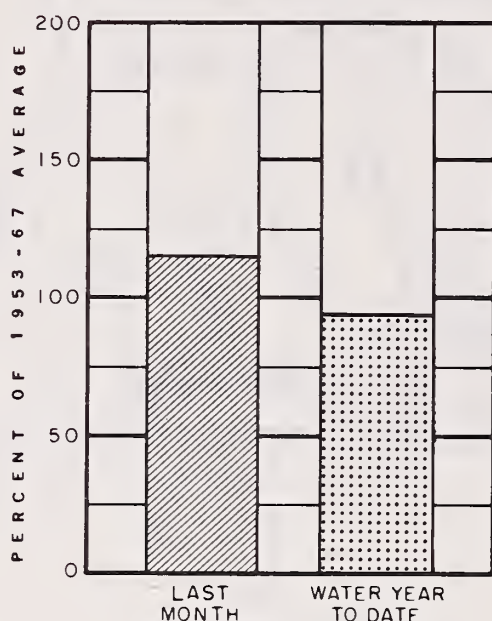
Grande Ronde at La Grande



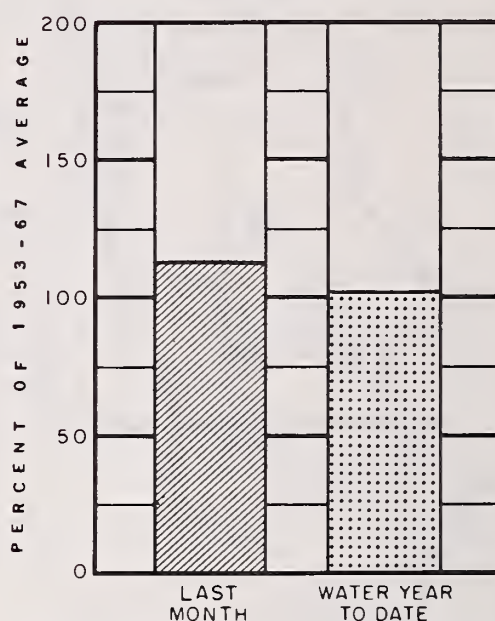
Umatilla at Pendleton



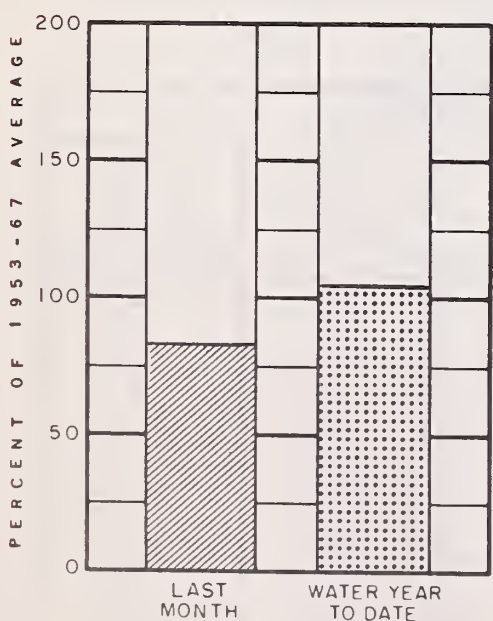
John Day at Service Creek



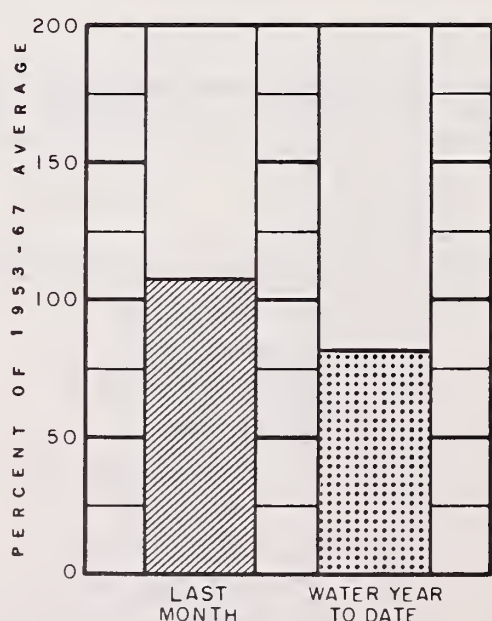
Deschutes at Moody



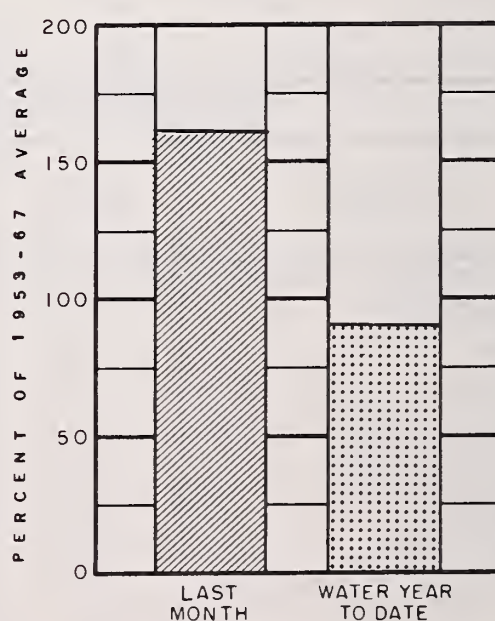
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.

WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies will be available for most Malheur County water users during the summer of 1969. An exception is the Vale-Oregon Irrigation District which will have near average supplies.

SNOW COVER

Warm temperatures during the first two weeks of April melted most of the snowpack. Snow remains on the Upper Jordan Creek watershed and in the higher elevations of the Malheur River.

PRECIPITATION

According to the U. S. Weather Bureau, April brought less than normal amounts of rainfall to the county. It was 82 percent of average.

SOIL MOISTURE

Soil moisture remains excellent and will benefit runoff from spring rainfall.

RESERVOIR STORAGE

All of Malheur County's principal reservoirs are storing above average amounts of water for May 1. Lake Owyhee contained 701,000 acre feet compared to its usable capacity of 715,000 a.f. Warm Springs, Agency Valley and Bully Creek Reservoirs held 236,400 a.f. compared to an average 208,000 acre feet.

STREAMFLOW

Streamflow during April from the rapid melt of the snowpack was two to four times normal.

Selected forecasts of May-September volume flows are as follows:

<u>Stream</u>	<u>Volume</u>	<u>Percent of 1953-67 Avg.</u>
Owyhee Reservoir net Inflow	200,000 a.f.	112
Malheur, No. Fk. at Beulah	30,000 a.f.	79
Malheur near Drewsey	25,000 a.f.	74
*Jordan Cr. above Lone Tree Cr.	55,000 a.f.	114

*May-July

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Excellent	Average
Bully Creek	Excellent	Average
Cow Creek	Excellent	Average
Jordan Creek	Excellent	Average
Jordan Valley Irrig. Dist.	Excellent	Excellent
McDermitt Creek	Excellent	Average
Oregon Canyon Creek	Excellent	Average
Owyhee Project	Excellent	Excellent
Succor Creek	Excellent	Average
Termile Creek	Excellent	Average
Vale-Oregon Irrig. Dist.	Average	Average
Warm Springs Irrig. Dist.	Average	Average
Willow Creek (Reservoir)	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Agency Valley	60.0	54.4	42.8	50.1
Antelope	55.0	56.0*	23.1	30.7
Bully Creek	30.0	30.0	23.1	20.6
Owyhee	715.0	701.0	432.2	531.9
Warm Springs	191.0	152.0	106.7	137.2
Willow Creek #3	26.0	b	- -	- -
*May 6, 1969.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1780	Jordan Creek above Lone Tree Creek	55	May-July	48	114
2140	Malheur near Drewsey	24	May-July	33	73
		25	May-Sept.	34	74
2175	Malheur, North Fork at Beulah ^d	25	May-July	33	76
		30	May-Sept.	38	79
1825	Owyhee Reservoir net Inflow ^k	175	May-July	160	109
		200	May-Sept.	179	112

SOIL MOISTURE

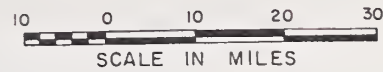
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bear Creek (Nev.)	7800	72	16.8	c			
Big Bend (Nev.)	6700	48	16.7	4/24	16.5	16.4	15.9
Blue Mountain Springs	5900	42	16.9	4/28	12.5	12.9	12.1
Crane Prairie	5375	48	18.2	4/28	18.0	18.1	16.4
Folly Farm	4450	30	12.5	c			
Jack Cr., Lower (Nev.)	6800	48	8.6	4/24	8.3	8.3	8.3
Jordan Valley	4390	36	14.8	4/30	16.9	10.3	- -
Mud Flat (Ida.)	5500	48	12.8	c			
Rodeo Flat (Nev.)	6800	42	11.0	4/24	11.0	10.9	9.2
Stinking Water Summit	4800	48	21.9	4/28	21.9	- -	- -
Taylor Canyon (Nev.)	6200	48	15.1	4/29	15.0	14.6	13.2
Triangle (Ida.)	5150	48	16.6	c			

SNOW

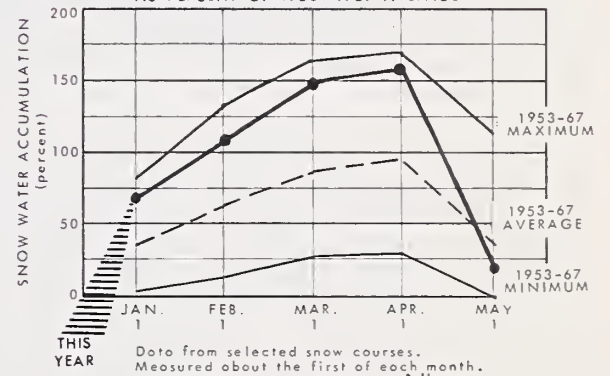
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Antelope Ridge (Ida.)	5900	c				
Barney Creek	5950	4/29	6	2.6	0.0	- -
Battle Creek (Ida.)	5700	c				
Bear Creek (Nev.)	7800	4/28	46	20.3	15.2	19.4
Big Bend (Nev.)	6700	4/24	0	0.0	0.0	0.9
Blue Mountain Springs	5900	4/28	11	5.0	0.0	8.4
Buck Pasture	5700	c				
Buckskin, Lower (Nev.)	6700	c				
Buckskin, Upper (Nev.)	7200	c				
Bull Basin (Ida.)	5600	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS

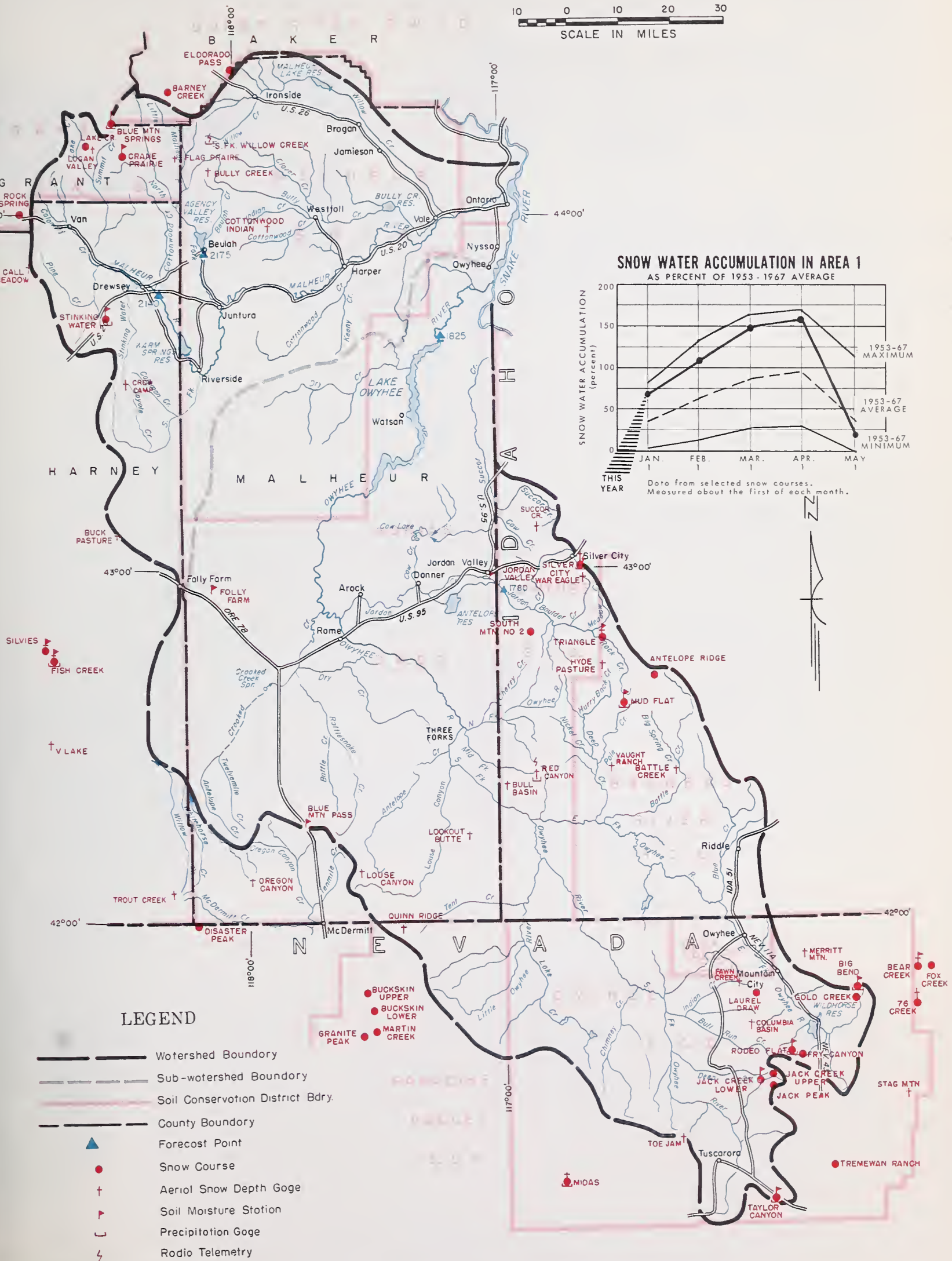


SNOW WATER ACCUMULATION IN AREA 1
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- ⬮ Soil Moisture Station
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Bully Creek	5300	c				
Call Meadow	5340	c				
Columbia Basin (Nev.)	6650	c				
Cottonwood-Indian	4320	c				
Crane Prairie	5375	c				
Crow Camp	5500	c				
Disaster Peak (Nev.)	6500	c				
Eldorado Pass	4600	4/25	0	0.0	0.0	0.0 ^h
Fawn Creek (Nev.)	7000	c				
Fish Creek	7900	c				
Flag Prairie	4750	c				
Fox Creek (Nev.)	6800	c				
Fry Canyon (Nev.)	6700	4/24	0	0.0	0.0	1.0 ^h
Gold Creek (Nev.)	6600	4/24	0	0.0	0.0	0.0 ^h
Granite Peak (Nev.)	7800	c				
Hyde Pasture (Ida.)	5800	c				
Jack Creek, Lower (Nev.)	6800	4/24	0	0.0	0.0	0.2 ^h
Jack Creek, Upper (Nev.)	7250	4/24	0	0.0	0.0	3.5 ^h
Jack Peak (Nev.)	8420	4/24	0	0.0	21.7	26.6 ^h
Lake Creek	5120	c				
Laurel Draw (Nev.)	6700	c				
Logan Valley	5100	c				
Lookout Butte	5650	c				
Louse Canyon	6440	c				
Martin Creek (Nev.)	6700	c				
Merritt Mountain (Nev.)	7000	c				
Midas (Nev.)	7200	c				
Mud Flat (Ida.)	5500	c				
Oregon Canyon	6950	c				
Quinn Ridge (Nev.)	6300	c				
Red Canyon (Ida.)	6500	c				
Rock Spring	5100	5/1	0	0.0	0.0	0.4 ^m
Rodeo Flat (Nev.)	6800	4/24	0	0.0	0.0	1.2 ^h
76 Creek (Nev.)	7100	c				
Silver City (Ida.)	6400	4/28	24	11.2	T	6.7 ^h
Silvies	6900	c				
South Mountain #2 (Nev.)	6340	4/30	11	5.8	0.0	- -
Stag Mountain (Nev.)	7800	c				
Stinking Water	4800	c				
Succor Creek (Ida.)	6100	c				
Taylor Canyon (Nev.)	6200	4/29	0	0.0	0.0	0.1 ^h
Toe Jam (Nev.)	7700	c				
Tremewan Ranch (Nev.)	5700	4/24	0	0.0	0.0	0.0 ^h
Triangle (Ida.)	5150	c				
Trout Creek	7800	c				
"V" Lake	6600	c				
Vaught Ranch (Ida.)	5950	c				
War Eagle (Ida.)	7700	c				

WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of

MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Average water supplies are in prospect for water users in northeastern Oregon this coming summer. Conditions remain about the same as last month due to good rains and cool temperature during the last half of April.

SNOW COVER

Some melting has occurred at lower elevations but the snowpack remains near normal for this time of year over most of the area. Exceptions are on the Burnt and the upper main stem of the Powder where rapid melt occurred during the first week of April.

PRECIPITATION

April brought generous amounts of rain to most of the area. The U. S. Weather Bureau reported 122 percent of average precipitation over the Burnt, Grande Ronde and Powder River watersheds.

RESERVOIR STORAGE

Principal reservoirs in the area are now nearly full from the excellent stream-flow which occurred during April. The exception is Phillips Lake which contains 39,600 acre feet compared to its usable capacity of 73,500 acre feet. Unity and Thief Valley Reservoirs are both filled--containing 25,200 acre feet and 17,400 acre feet respectively. Wallowa Lake held 33,500 a.f. on May 1. Its usable capacity is 37,500 acre feet.

STREAMFLOW

Prospective streamflow is as follows:

<u>Stream</u>	<u>Period</u>	<u>Forecast</u>	<u>Percent 1953-67 Average</u>
Grande Ronde at La Grande	May-Sept	108,000 a.f.	103
Burnt near Hereford	May-Sept	12,000 a.f.	77
Imnaha near Imnaha	Apr.-Sept	300,000 a.f.	98
Powder at Baker	May-Sept	32,000 a.f.	73
Eagle Cr. abv. Skull Cr.	May-Sept	160,000 a.f.	102

Report prepared by
TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) May 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Average
Big Creek	Average	Average
Clover Cr. (nr. N. Powder)	Average	Average
Cove	Average	Average
Durkee	Average	Average
Eagle Valley	Average	Average
Elgin	Average	Average
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Average
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Creek	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Average
Summerville	Average	Average
Sumpter Valley	Average	Average
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Thief Valley	17.4	17.4	- -	- -
Unity	25.2	25.2	25.6	24.1
Wallowa Lake	37.5	33.5	30.3	25.9
Phillips Lake	73.5	39.6	- -	- -

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

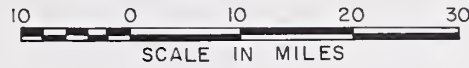
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953- 67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3305	Bear near Wallowa	59	May-Sept.	57	104
2730	Burnt near Hereford ^d	10.0	May-June	13.6	74
		12.0	May-Sept.	15.5	77
3200	Catherine near Union	56	May-Sept.	52	108
2882	Eagle Creek above Skull Creek	145	May-July	143	101
		160	May-Sept.	156	102
3190	Grande Ronde at La Grande	104	May-July	101	103
		108	May-Sept.	105	103
3295	Hurricane Creek near Joseph	46	April-Sept.	47	98
2920	Imnaha at Imnaha	300	April-Sept.	307	98
3300	Lostine near Lostine	130	April-Sept.	125	104
2755	Powder River near Baker	30	May-July	42	71
		32	May-Sept.	44	73
3250	Wallowa, East Fork near Joseph ^d	8.7	May-July	8.7	100
		11.2	May-Sept.	11.2	100

SOIL MOISTURE

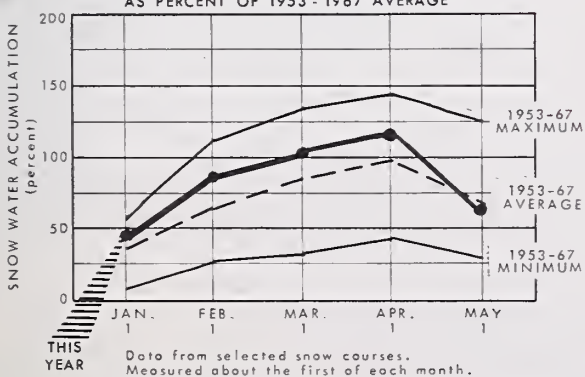
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME		ELEVATION					
Blue Mountain Summit	5100	36	16.8	4/24	16.2	13.0	13.2
Deoley Mountain	5430	36	9.2	4/24	7.0	7.1	6.1
Emigrant Springs	3925	48	22.3	4/25	21.6	20.6	20.4
Ladd Summit	3730	48	18.9	4/24	13.5	9.9	13.3
Moss Springs	5850	42	25.8	4/26	15.7	15.0	16.4
Tollgate	5070	48	23.6	4/29	18.1	18.7	18.8

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 2
AS PERCENT OF 1953 - 1967 AVERAGE



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Soil Moisture Station
- † Aerial Snow Depth Gage
- ⊥ Precipitation Gage

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Aneroid Lake #1	7480	4/28	88	39.8	39.4	39.7 ^m
Aneroid Lake #2	7300	4/28	76	36.6	33.8	34.7 ^h
Anthony Lake	7125	4/28	56	26.6	22.2	30.3 ^h
Bald Mountain ^e (Ore.)	6700	4/26	29	13.6	15.8	20.1 ^m
Barney Creek	5950	4/29	6	2.6	0.0	- -
Beaver Reservoir	5340	4/25	32	13.0	2.7	6.9
Big Sheep ^e	6200	4/26	43	20.2	30.2	22.0 ^m
Blue Mountain Summit	5098	4/29	3	1.3	0.0	1.9
Bourne	5800	4/28	4	1.6	0.0	7.7 ^h
County Line	4800	5/2	0	0.0	0.0	- -
Dooley Mountain	5430	4/24	4	1.3	0.0	1.9 ^h
Eilertson Meadows	5400	4/25	9	3.3	0.0	4.5 ^h
Eldorado Pass	4600	4/25	0	0.0	0.0	0.0 ^h
Gold Center	5340	4/28	1	0.5	0.0	4.2 ^h
Goodrich Lake	6775	^b			27.3	27.0 ^h
Intake House	4930	4/25	13	5.3	0.0	- -
Little Alps	6200	4/28	34	14.9	8.0	13.1 ^h
Little Antone	5000	4/28	0	0.0	0.0	- -
Lucky Strike	5050	4/30	25	10.5	2.0	8.5 ^h
Meacham	4300	4/25	3	0.5	0.0	2.1
Mirror Lake ^e	8200	4/26	147	69.1	88.7	74.5 ^m
Moss Springs	5850	4/26	53	21.6	17.4	21.2 ^h
Power Plant	3990	4/25	0	0.0	0.0	- -
Schneider Meadows	5400	4/29	45	20.9	24.2	24.3 ^h
Schoolmarm	4775	5/2	0	0.0	0.0	0.6 ^h
Standley ^e	7400	4/26	77	36.2	30.4	31.6 ^m
Taylor Green	5740	4/26	28	11.4	6.6	- -
Tipton	5100	4/30	0	0.0	0.0	1.6 ^h
Tollgate	5070	4/29	30	13.8	0.0	18.0
TV Ridge ^e	7000	4/26	45	21.2	20.2	- -



WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

OREGON

as of

MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies are in prospect for water users this spring and summer in Gilliam, Umatilla and Morrow Counties.

SNOW COVER

Rapid melt of mountain snow occurred early in April due to warm temperatures. Snow remains at only the higher elevation snow courses such as Tollgate and Lucky Strike. However, the snowpack is still 80 percent of normal for this time of year.

PRECIPITATION

Generous amounts of rain were received in the area during April. The U. S. Weather Bureau reported 139 percent of normal rainfall.

RESERVOIR STORAGE

Principal reservoirs are now full or nearly full. Cold Springs contains 49,700 acre feet while McKay Reservoir is holding 70,800 a.f.

STREAMFLOW

Streamflow was excellent during April according to the U.S. Geological Survey. The Umatilla near Pendleton produced 135,700 a.f. during the month. This is 180 percent of average. Selected May-September volume forecasts are as follows:

<u>Stream</u>	<u>Forecast, a.f.</u>	<u>Percent 1953-67 Average</u>
*Butter Creek near Pine City	4,500	112
McKay near Pilot Rock	12,000	109
Umatilla near Pendleton	88,000	110
So. Fk. Walla Walla nr. Milton	57,000	114
No. Fk. Walla Walla nr. Milton	9,700	111

*May-July

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fork	Average	Average
Walla Walla River, So. Fork	Average	Average
Walla Walla River, Main	Average	Average
Walla Walla River, Little	Average	Average
Couse Creek	Excellent	Average
Dry Creek	Excellent	Average
Pine Creek	Excellent	Average
Umatilla River, Main	Excellent	Average
Wildhorse Creek	Excellent	Average
Umatilla R. (McKay Res.)	Excellent	Average
McKay Creek	Excellent	Average
Birch Creek	Excellent	Average
Butter Creek	Excellent	Average
Willow Creek	Excellent	Average
Rhea Creek	Excellent	Average
Rock Creek (John Day tributary)	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cold Springs	50.0	49.7	44.6	49.7
McKay	73.8	70.8	36.4	57.7

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0320	Butter Creek near Pine City	4.5	May-July	4.0	112
0225	McKay near Pilot Rock	12.0	May-Sept.	11.0	109
0200	Umatilla River near Gibbon	50	May-July	42	119
		55	May-Sept.	48	114
0210	Umatilla River at Pendleton	83	May-July	75	110
		88	May-Sept.	80	110
0110	Walla Walla, No. Fork near Milton	9.2	May-July	8.2	112
		9.7	May-Sept.	8.7	111
0100	Walla Walla, So. Fork near Milton	43	May-July	38	114
		57	May-Sept.	50	114

SOIL MOISTURE

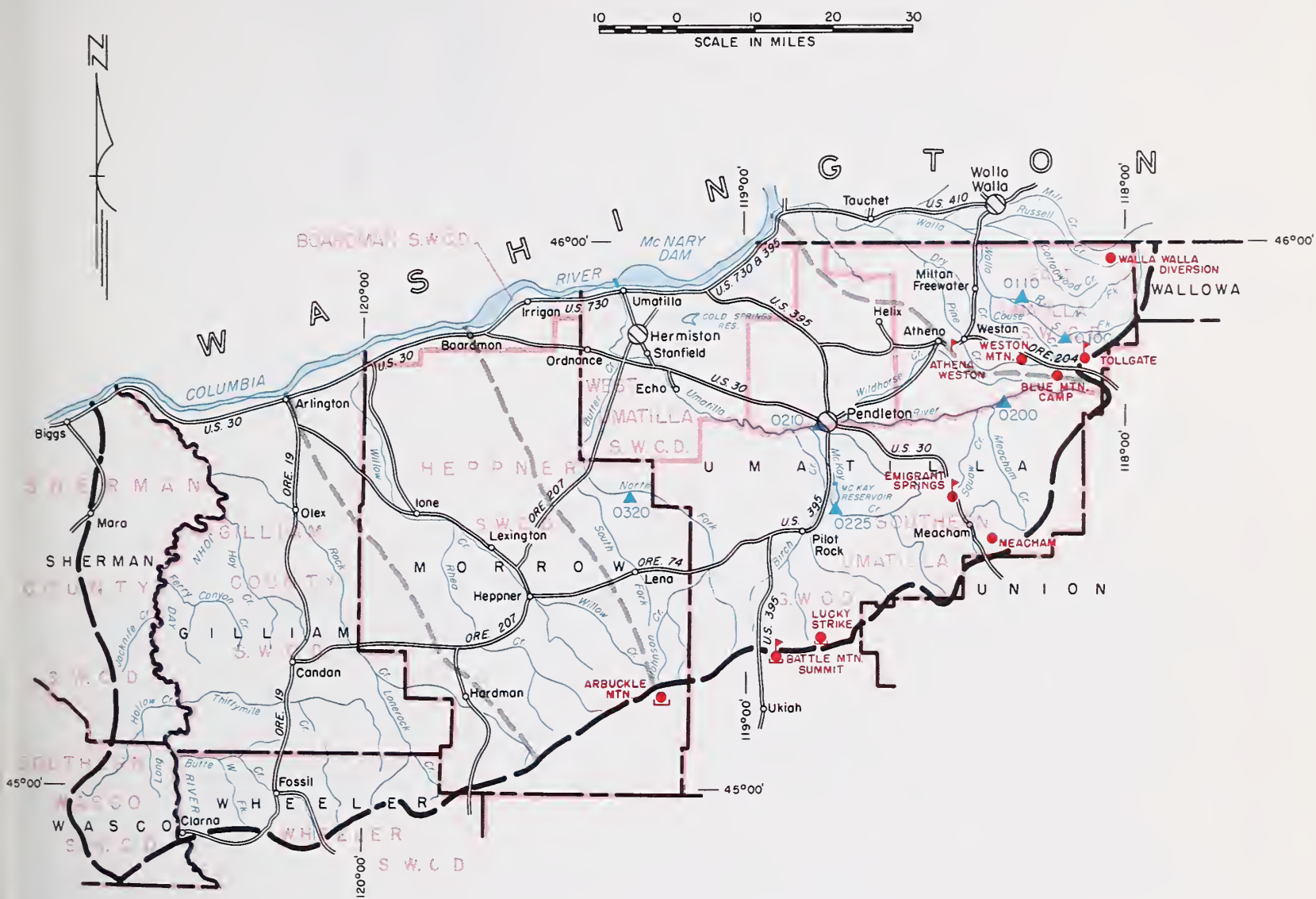
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Athena-Weston	1700	48	18.7	3/27	11.2 ^f	11.1	11.4
Battle Mtn. Summit	4340	48	13.8	4/25	13.8	12.4	13.8
Emigrant Springs	3925	48	22.3	4/25	21.6	20.6	20.4
Tollgate	5070	48	23.6	4/29	18.1	18.7	18.8

SNOW

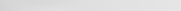







SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Arbuckle Mountain	5400	4/29	0	0.0	0.0	2.8 ^h
Battle Mountain Summit	4340	4/25	0	0.0	0.0	0.3 ^m
Blue Mountain Camp	4300	4/29	2	0.3	0.0	3.3 ^h
Emigrant Springs	3925	4/25	2	0.6	0.0	1.1
Lucky Strike	5050	4/30	25	10.5 ^j	2.0	8.5 ^h
Meacham	4300	4/25	3	0.5	0.0	2.1
Tollgate	5070	4/29	30	13.8	0.0	18.0
Walla Walla Diversion	3400	5/1	0	0.0	-	-
Weston Mountain	2700	4/29	0	0.0	0.0	0.0 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

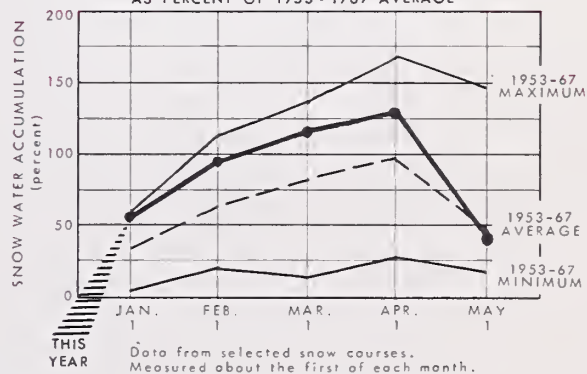
UMATILLA, WALLA WALLA, WILLOW, ROCK,
LOWER JOHN DAY WATERSHEDS



LEGEND

-
-  Watershed Boundary
 Sub-watershed Boundary
 Soil Conservation District Bdry.
 County Boundary
 Forecast Point
 Snow Course
 Soil Moisture Station
 Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3
AS PERCENT OF 1953 - 1967 AVERAGE



WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of

MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies will be available to most farmers and ranchers in Grant and Wheeler Counties in 1969. Soil moisture is excellent and will facilitate runoff from spring rains.

SNOW COVER

Rapid melt of mountain snow occurred in early April from warm temperature but snow still remains at higher elevations. The snowpack is 66 percent of average for this time of year.

PRECIPITATION

Generous amounts of rain fell over the area in April. According to the U. S. Weather Bureau precipitation was 146 percent of average.

STREAMFLOW

Provisional runoff data provided by the U. S. Geological Survey indicated a flow 148 percent of average for the John Day at Service Creek.

Selected revised April-September volume forecasts are as follows:

<u>Stream</u>	<u>Forecast Acre Feet</u>	<u>Percent of 1953-67 Average</u>
John Day at Prairie City	59,000	128
John Day, Mid. Fk. at Ritter	146,000	126
Strawberry near Prairie City	8,600	102

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Beech Creek	Average	Average
Beech Creek-Fox-Long Cr.	Excellent	Average
Bridge-Mountain Creeks	Average	Average
Camas Creek	Excellent	Average
Cherry Creek	Excellent	Average
Indian-Pine Creeks	Average	Average
John Day River, Main Fork	Excellent	Average
John Day River, Mid. Fork	Excellent	Average
John Day River, N. Fork	Excellent	Average
John Day River, S. Fork	Excellent	Average
Monument-Kimberly	Excellent	Average
Strawberry Creek	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE

STREAMFLOW FORECASTS^a (1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953- 67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0385	John Day at Prairie City	52	April-July	42	124
		59	April-Sept.	46	128
0440	John Day, Middle Fork at Ritter	140	April-July	112	125
		146	April-Sept.	116	126
0375	Strawberry near Prairie City	7.9	April-July	7.7	103
		8.6	April-Sept.	8.4	102

SOIL MOISTURE

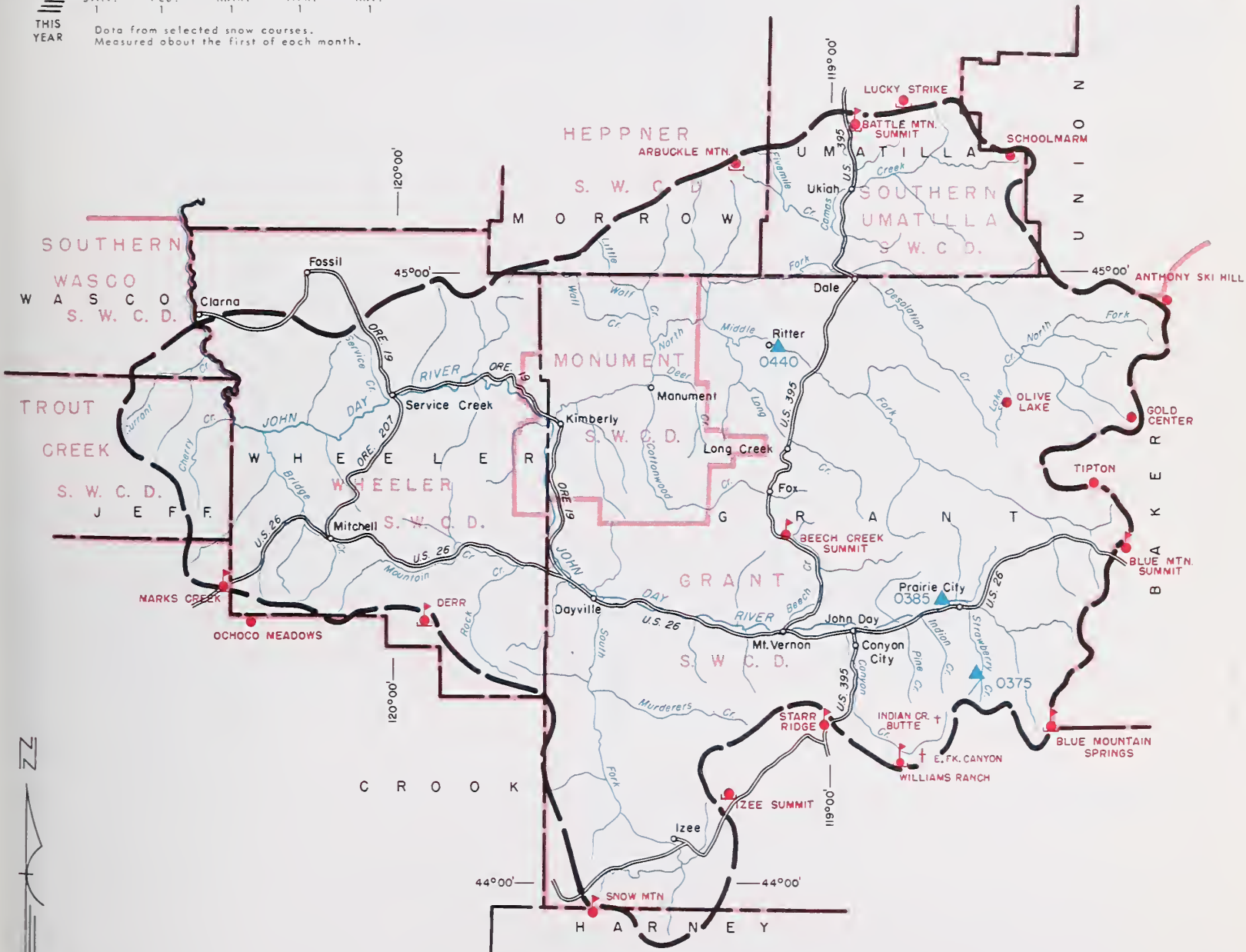
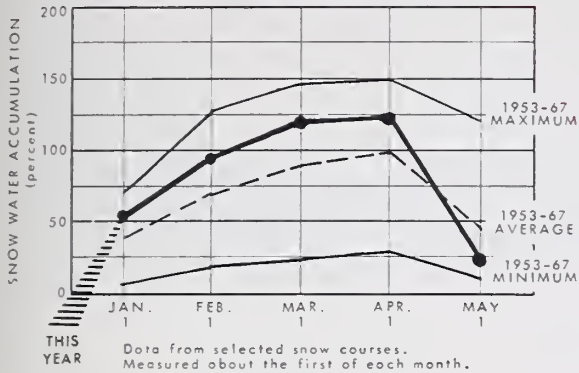
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
NAME	ELEVATION	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
Battle Mountain Summit	4340	48	13.8	4/25	13.8	12.4	13.8
Beech Creek	4800	48	21.3	4/30	17.6	15.0	17.3
Blue Mountain Springs	5900	42	16.9	4/28	12.5	12.9	12.1
Blue Mountain Summit	5100	36	16.8	4/24	16.2	13.0	13.2
Derr	5670	24	9.0	3/28	8.9 <i>f</i>	8.9 <i>f</i>	8.1 <i>f</i>
Marks Creek	4540	36	14.1	4/25	13.4	11.8	13.5
Snow Mountain	6300	48	16.7	3/25	14.8 <i>f</i>	12.2 <i>f</i>	15.5 <i>f</i>
Starr Ridge	5150	36	10.6	4/30	10.6	10.5	10.5
Williams Ranch	4500	42	17.9	4/30	17.6	- -	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER JOHN DAY WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 4
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- † Aerial Snow Depth Gage
- Precipitation Gage

Upper John Day Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Anthony Lake	7125	4/28	56	26.6	22.2	30.3 <i>h</i>
Arbuckle Mountain	5400	4/29	0	0.0	0.0	2.8 <i>h</i>
Battle Mountain Summit	4340	4/25	0	0.0	0.0	0.3 <i>m</i>
Beech Creek Summit	4800	4/30	0	0.0	0.0	0.6 <i>h</i>
Blue Mountain Springs	5900	4/28	11	5.0	0.0	8.4 <i>h</i>
Blue Mountain Summit	5098	4/29	3	1.3	0.0	1.9
Derr	5670	<i>c</i>				
East Fork Canyon	5700	<i>c</i>				
Gold Center	5340	4/28	1	0.5	0.0	4.2 <i>h</i>
Indian Creek Butte	6550	<i>b</i>			- -	16.1 <i>m</i>
Izee Summit	5293	4/30	0	0.0	0.0	1.9 <i>m</i>
Lucky Strike	5050	4/30	25	10.5 <i>j</i>	2.0	8.5 <i>h</i>
Marks Creek	4540	4/25	T	T	0.0	T <i>h</i>
Ochoco Meadows	5200	<i>c</i>				
Olive Lake	6000	4/24	52	19.2	12.0	16.5 <i>h</i>
Schoolmarm	4775	5/2	0	0.0	0.0	0.6 <i>h</i>
Snow Mountain	6300	<i>c</i>				
Starr Ridge	5150	4/30	0	0.0	0.0	0.6 <i>h</i>
Tipton	5100	4/30	0	0.0	0.0	1.6 <i>h</i>
Williams Ranch	4500	<i>c</i>				

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of
MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Near average to above average water supplies are in prospect for most water users on the Deschutes and Crooked River watersheds.

SNOW COVER

Rapid melt of the snowpack on the Crooked River and lower elevations of the Deschutes occurred early in April. The snowpack remaining at higher elevations in the Cascades is slightly above normal for this time of year.

PRECIPITATION

Rainfall was 77 percent of average in April according to the U. S. Weather Bureau.

RESERVOIR STORAGE

Prineville Reservoir is now full and spilling. Ochoco Reservoir contains 33,800 acre feet and will come close to filling. The Upper Deschutes reservoirs, Wickiup, Crescent Lake and Crane Prairie, contained 226,900 acre feet. Stored water, in addition to the natural flow of the Deschutes River at Bend, plus some pumping from the Crooked River, will provide near average supplies for the North Unit.

STREAMFLOW

Streamflow, as indicated by the 118 percent of average volume recorded on the Deschutes at Moody, was mostly above average in April.

Selected volume forecasts for the area are as follows:

<u>Stream</u>	<u>Period</u>	<u>Forecast (a.f.)</u>	<u>% 1953-67 Average</u>
Crane Prairie Total Inflow	May-Sept	136,000	122
Crescent near Crescent Lake	May-Sept	19,000	79
Deschutes at Benham Falls	May-Sept	425,000	83
Little Deschutes near Lapine	Apr.-Sept	100,000	105
Crooked near Post	May-Sept	40,000	100
Ochoco net Inflow	May-Sept	12,000	99

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Average
Crooked River	Average	Average
Deschutes River	Average	Average
Hay-Trout Creeks	Average	Average
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Average
North Unit Irrig. Dist.	Average	Average
Ochoco Creek	Average	Average
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Average
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Excellent	Excellent
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Crane Prairie	55.3	31.6	32.3	45.8
Crescent Lake	86.9	32.5	48.2	50.7
Ochoco	47.5	33.8	18.0	38.5
Prineville	153.0	153.6	119.6	147.1 ^m
Wickiup	200.0	168.2	169.3	193.7

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

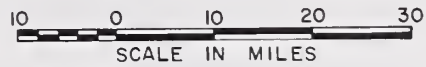
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	82	May-July	68	120
		136	May-Sept.	111	122
0600	Crescent at Crescent Lake ^d	15.0	May-July	18.5	81
		19.0	May-Sept.	24	79
0795	Crooked near Post	38	May-July	38	100
		40	May-Sept.	40	100
0645	Deschutes at Benham Falls ^d	240	May-July	305	79
		425	May-Sept.	509	83
0500	Deschutes below Snow Creek	61	May-Sept.	59	103
0630	Deschutes, Little near Lapine ^d	83	April-July	83	100
		100	April-Sept.	95	105
0848	Ochoco Reservoir net Inflow	12.0	May-Sept.	12.1	99
0555	Odell near Crescent	34	April-Sept.	30	113
0750	Squaw near Sister ^d	51	April-Sept.	51	100
0730	Tumalo near Bend	54	April-Sept.	49	110

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Derr	5670	24	9.0	3/28	8.9 ^f	8.9 ^f	8.1 ^f
Marks Creek	4540	36	14.1	4/25	13.4 ^f	11.8 ^f	13.5 ^f
Snow Mountain	6300	48	16.7	3/25	14.8 ^f	12.2 ^f	15.5 ^f

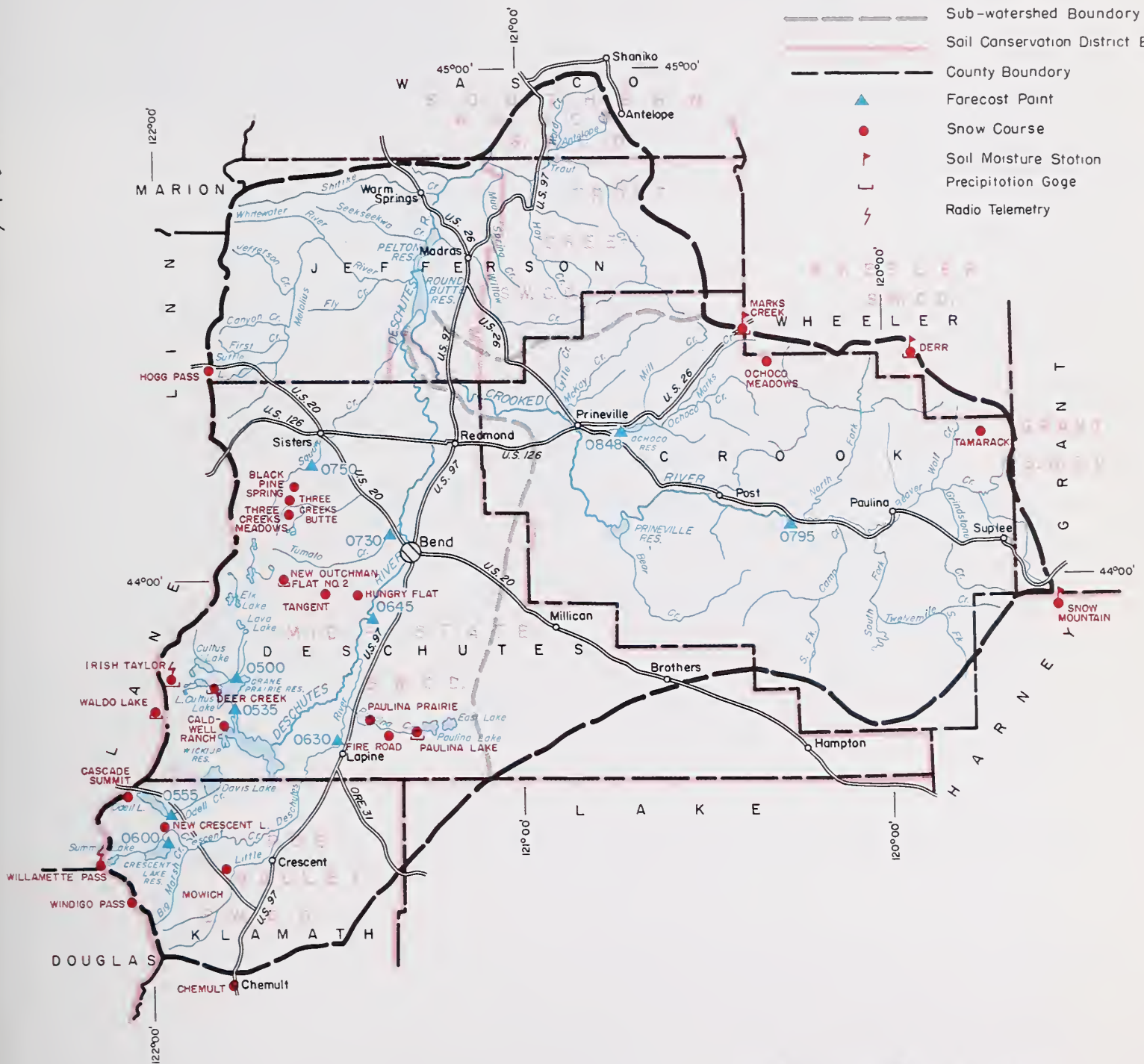
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS

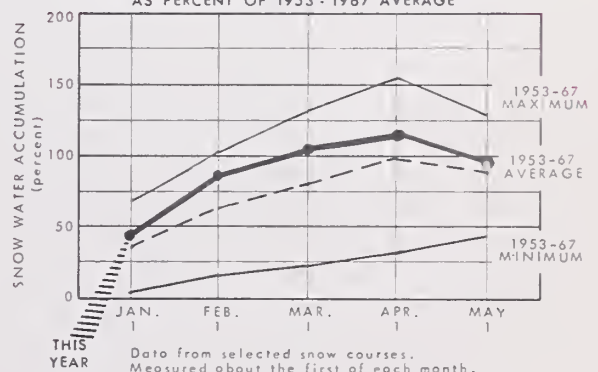


LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- ⌈ Precipitation Gage
- ⚡ Radio Telemetry



SNOW WATER ACCUMULATION IN AREA 5
AS PERCENT OF 1953-1967 AVERAGE



Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Black Pine Spring	4600	4/30	0	0.0	0.0	0.3
Caldwell Ranch	4400	c				
Cascade Summit	4880	4/28	66	30.7	7.7	25.3
Chemult	4760	4/29	T	0.1	0.0	0.8 ^h
Deer Creek	4554	c				
Derr	5670	c				
Fire Road	5050	DISCONTINUED				
Hogg Pass	4755	5/1	104	49.1	20.2	41.6
Hungry Flat	4400	4/29	0	0.0	0.0	0.0
Irish-Taylor	5500	c				
Marks Creek	4540	4/25	T	T	0.0	T ^h
Mowich	4700	4/29	0	0.0	0.0	0.0 ^h
New Crescent Lake	4800	4/29	11	5.3	0.0	5.1
New Dutchman Flat #2	6400	4/29	101	49.8	27.7	54.3
Ochoco Meadows	5200	c				
Paulina Lake	6330	DISCONTINUED				
Paulina Prairie	4285	DISCONTINUED				
Snow Mountain	6300	c				
Tamarack	4800	c				
Tangent	5400	4/29	24	10.9	T	11.9
Three Creeks Butte	5200	4/30	4	1.6	0.0	2.6
Three Creeks Meadows	5650	4/30	38	19.0	1.0	13.2
Waldo Lake	5500	b			15.5	- -
Willamette Pass	5600	4/28	94	46.6	26.3	42.4
Windigo Pass	5800	4/29	88	42.2	21.6	44.0

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Above average water supplies are in prospect during the spring and summer of 1969 for water users in Hood River and Wasco Counties.

SNOW COVER

Warm temperatures during late March and early April melted the low and some median elevation snow. High elevation areas gained 1 to 2 inches of water. The average snowpack was 135 percent of the normal on May 1.

PRECIPITATION

The U. S. Weather Bureau reports the precipitation for the area was 56 per cent of normal. This is the third month the precipitation has been half or less than half of normal.

SOIL MOISTURE

Soils remain well wetted and will favor runoff from snowmelt and spring rains.

RESERVOIR STORAGE

Clear Lake Reservoir contains 4,100 acre feet of water compared to an average of 4,900 acre feet.

STREAMFLOW

Forecasts of expected streamflow for the period May-September are as follows:

<u>Stream</u>	<u>Volume (a.f.)</u>	<u>Percent of 1953-67 Average</u>
Hood River near Hood River	319,000	131
Hood River, West Fork near Dee	159,000	142
White River below Tygh Valley	136,000	132

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Excellent	Average
Badger Creek	Excellent	Average
Dee Irrigation District	Excellent	Average
East Fork Irrig. Dist.	Excellent	Average
Farmers Irrigation Dist.	Excellent	Average
Hood River Irrig. Dist.	Excellent	Average
Juniper Flat	Excellent	Average
Middle Fork Irrig. Dist.	Excellent	Average
Mile Creeks	Excellent	Average
Mill Creek	Excellent	Average
Mount Hood Irrig. Dist.	Excellent	Average
Rock-Gate-Threemile Crs.	Excellent	Average
Tygh Creek	Excellent	Average
White River	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	11.9	4.1	3.8	4.9

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Cooper Spur	3490	72	26.4	5/5	14.2	14.0	- -

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1210	Hood near Hood River	250	May-July	189	132
		319	May-Sept.	243	131
1185	Hood, West Fork near Dee	129	May-July	90	143
		159	May-Sept.	112	142
1015	White below Tygh Valley	113	May-July	86	132
		136	May-Sept.	103	132

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Brooks Meadow	4300	c				
Clear Lake	3500	4/29	35	15.7	0.0	4.8 h
Clear Lake (Experimental)	3500	4/29	39	17.6	0.0	12.4 h
Cooper Spur	3490	5/5	T	T	0.0	- -
Greenpoint Reservoir	3400	c				
Knebal Springs	3850	c				
Parkdale	1770	c				
Phlox Point	5400	4/29	150	72.9	31.6	65.6
Red Hill	4400	c				
Still Creek	3670	4/29	72	33.0	3.0	19.0
Switchback	3255	c				
Tilly Jane	6000	c				
Ulrich Ranch Junction	3350	c				
Umbrella Falls	5400	5/1	160	79.7	40.5	- -
Upper Valley	2530	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

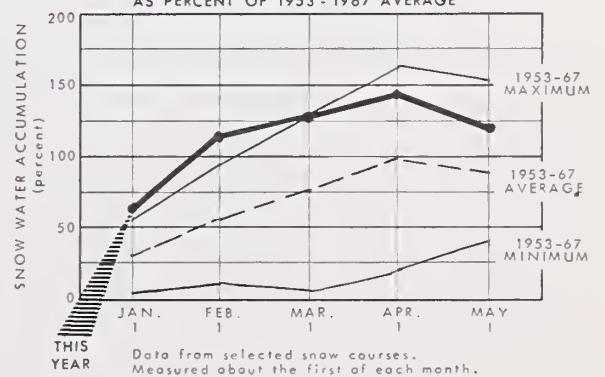


LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ↑ Aerial Snow Depth Gage
- ▼ Soil Moisture Station
- ⊥ Precipitation Gage
- ⊙ Temperature Gage
- ⚡ Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6

AS PERCENT OF 1953 - 1967 AVERAGE



WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply outlook for the 1969 summer season continues good to excellent for all parts of the Columbia Basin and adjacent Pacific Northwest watersheds. Flow of the upper Columbia and Kootenai Rivers for the remainder of the season is expected to be near but slightly below average. Near or above average flows are expected from streams of Montana, Washington, northern Idaho, Wyoming and Oregon. Southern Idaho streams should yield average to much above average amounts.

SNOW COVER

Snowfall during April was generally near or above normal in northern Idaho, western and northeastern Oregon, and most of Washington. It was much above normal in British Columbia, much below normal in southeastern Oregon, southern Idaho and central and southwestern Washington. Generally above normal temperature caused heavy depletion of the low elevation snowpack, particularly in southeastern Oregon and southern Idaho.

RESERVOIR STORAGE

Storage is generally above average, last month's deficit having been overcome by heavy April runoff from low elevations. Power reservoirs on the main stem Columbia and tributaries have above normal amounts in storage as a result of early filling to maintain the low water elevation in Franklin Roosevelt Lake during construction at the third power house.

STREAMFLOW

April runoff from low elevation watersheds has been heavy, as illustrated by the Owyhee River which produced 433 percent average. The flow of the Columbia River at The Dalles, Oregon, as reported by the U. S. Geological Survey, was above average for the sixth time during the past seven months. The record by months for the 1969 water year follows:

Month	Percent of Average Discharge (1953-67)			
October	119	(Adjusted for Storage)		
November	128	"	"	"
December	104	"	"	"
January	134	"	"	"
February	95	"	"	"
March	113	"	"	"
April	166	"	"	"

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1057	Columbia at The Dalles	66,300 100,000	MAY-JUNE MAY-SEPT.	59,688 92,457	111 109

HISTORICAL DATA (Columbia River at The Dalles)

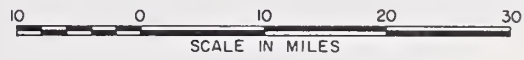
YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. - SEPT.	APR. - JUNE	MAY - JUNE		
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

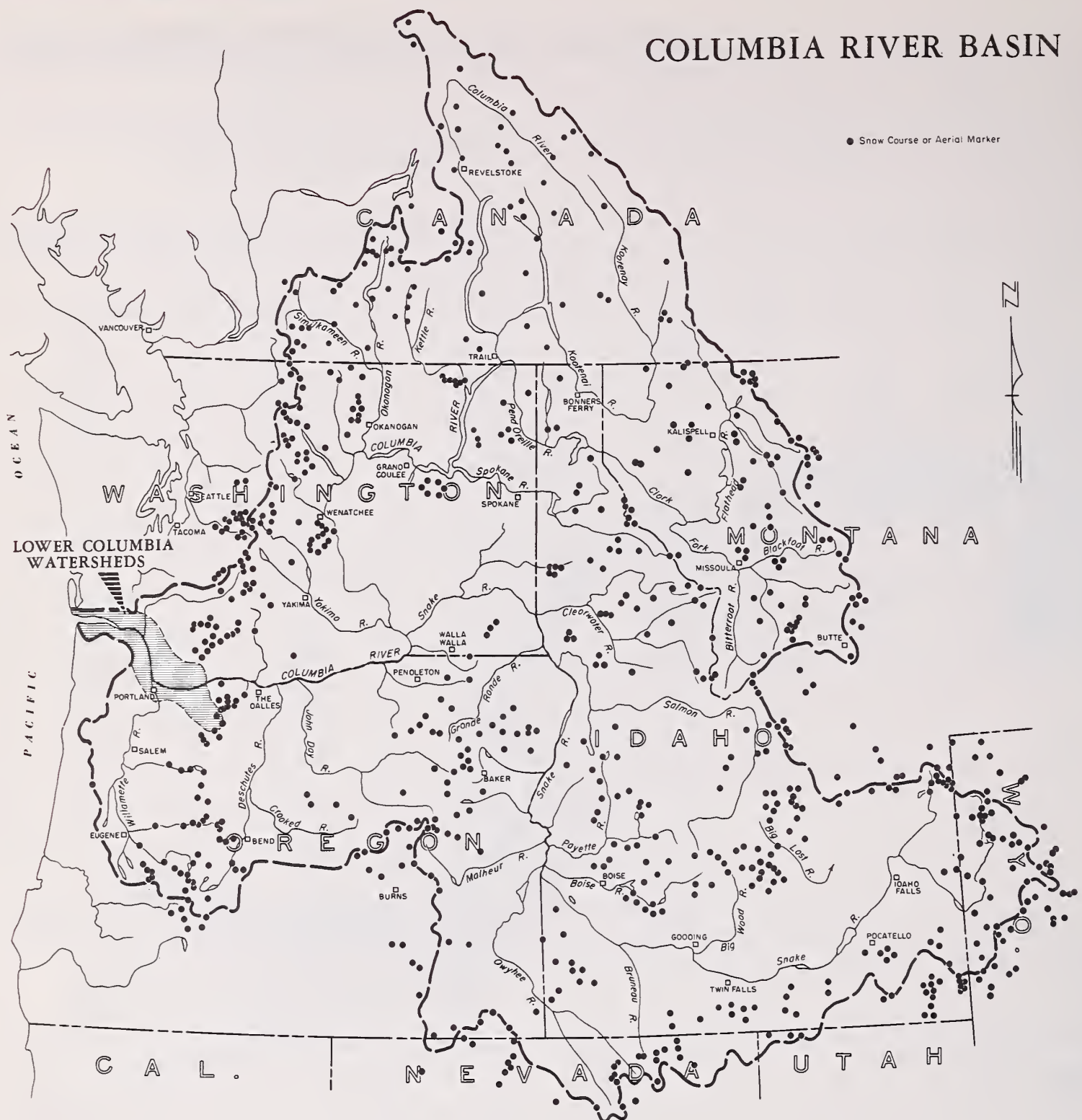
LOWER COLUMBIA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- River Miles
- Snow Course
- Temperature
- Rodia Telemetry

COLUMBIA RIVER BASIN



WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of
MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers and other water users in the Willamette Valley will have above average water supplies during the spring months and average supplies for the summer season of 1969.

SNOW COVER

Snow at the higher elevations during the month resulted in slight gains in water content in these areas. The May 1 snowpack was 126 percent of normal compared to the 123 percent measured on April first. The snow line has receded to about 3,000 feet as a result of above normal temperatures the last week in March and the first week in April.

SOIL MOISTURE

Soils are well wetted below the snowpack and will facilitate runoff from snow-melt and spring rains.

PRECIPITATION

The valley precipitation in the Willamette Basin averaged 87 percent of normal as reported by the U. S. Weather Bureau.

RESERVOIR STORAGE

The multiple purpose reservoirs on the upper Willamette have been filling during April and were at near normal levels for May first.

STREAMFLOW

The adjusted April flow of Middle Fork of Willamette below the North Fork was 114 percent of normal with the October-April flow at 102* percent of the 15-year average. The forecast for the April-September period is 898,000 a.f. which is 108 percent of average.

Forecasts for tributaries of the Willamette for the April-September period are as follows:

(continued)

Stream Station	Volume (a.f.)	Percent of 1953-67 Average
Row River near Dorena	129,000	117
McKenzie R. at McKenzie Br.	650,000	105
So. Santiam - Waterloo	698,000	114
No. Santiam - Mehama	1,133,000	126
Willamette at Salem	5,199,000	100
Clackamas R. at Estacada	953,000	119

*Provisional data from U. S. Geological Survey.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Excellent	Average
Clackamas	Excellent	Average
McKenzie	Average	Average
Molalla	Excellent	Average
Santiam, North	Excellent	Average
Santiam, South	Excellent	Average
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cottage Grove	30.0*	22.7	19.8	24.0
Cougar	155.2*	128.7	112.1	- -
Detroit	299.9*	242.2	242.0	231.8
Dorena	70.5*	53.9	53.5	53.8
Fall Creek	115.0*	13.2	86.6	- -
Fern Ridge	94.2*	79.6	91.1	86.6
Foster	30.0*	25.0	0.0	- -
Green Peter	270.0*	228.4	219.6	- -
Hills Creek	200.0*	141.0	147.8	163.1 ^m
Lookout Point	337.2*	227.4	207.5	290.3 ^m
Timothy Lake	61.7	51.1	60.1	55.3 ^m

*Multiple purpose reservoir--space reserved primarily for flood runoff.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
2080	Clackamas at Big Bottom	166	April-July	134	124
		210	April-Sept.	166	127
2100	Clackamas at Estacada	833	April-July	689	121
		953	April-Sept.	800	119
2095	Clackamas above Three Lynx	624	April-July	517	123
		723	April-Sept.	610	118
1590	McKenzie at McKenzie Bridge	500	April-July	465	108
		650	April-Sept.	614	105
1625	McKenzie near Vida	1087	April-July	1087	100
		1321	April-Sept.	1321	100
2090	Oak Grove Fork above Power Intake	168	April-July	125	114
		220	April-Sept.	163	110
1545	Row near Dorena	122	April-July	106	115
		129	April-Sept.	110	117
1830	Santiam, North at Mehama ^d	1027	April-July	800	128
		1133	April-Sept.	901	126
1875	Santiam, South at Waterloo	680	April-July	596	114
		698	April-Sept.	633	110
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge ^d	797	April-July	725	110
		898	April-Sept.	828	108
1910	Willamette at Salem ^d	4696	April-July	4696	100
		5199	April-Sept.	5199	100

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

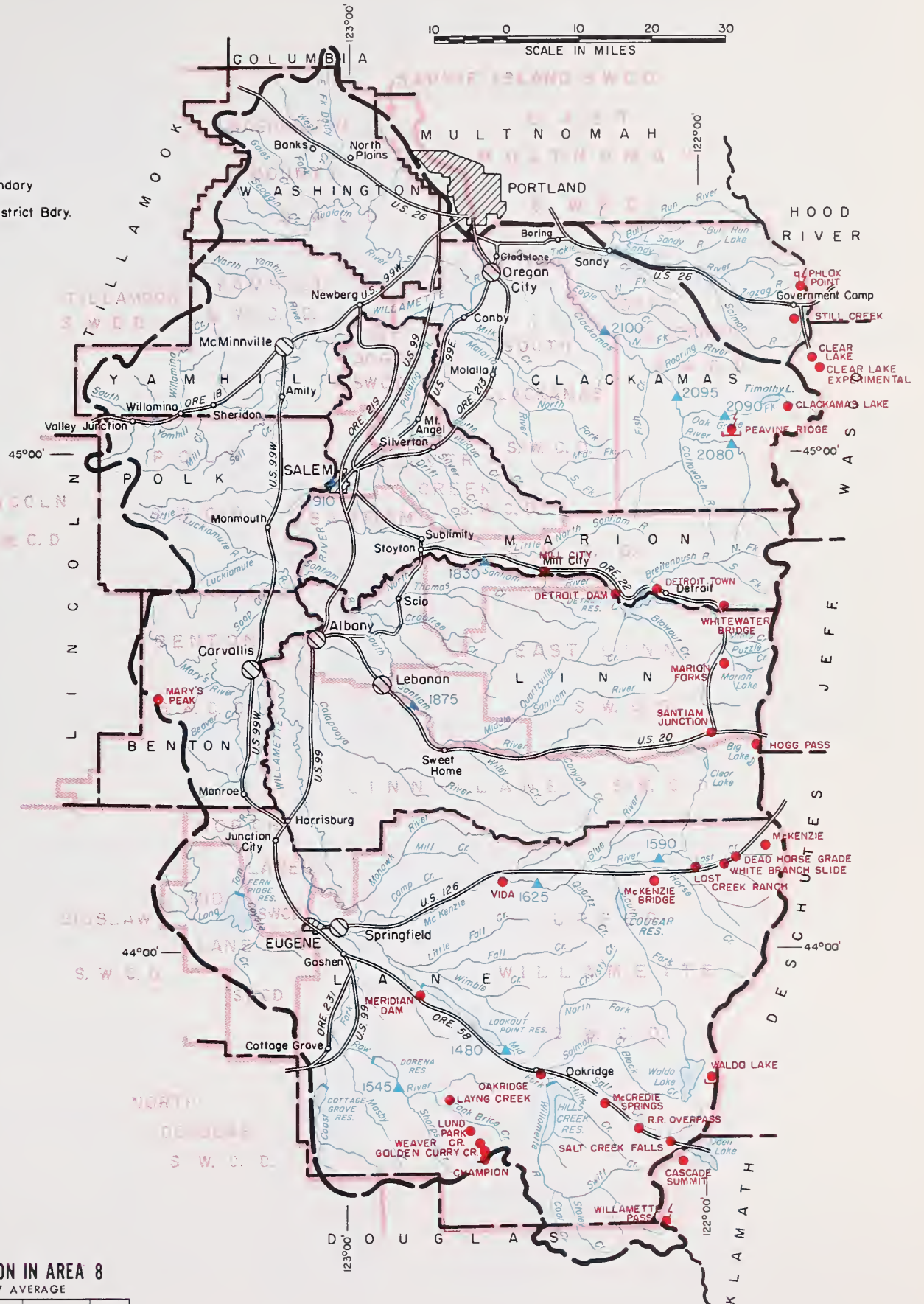
WILLAMETTE WATERSHEDS

LEGEND

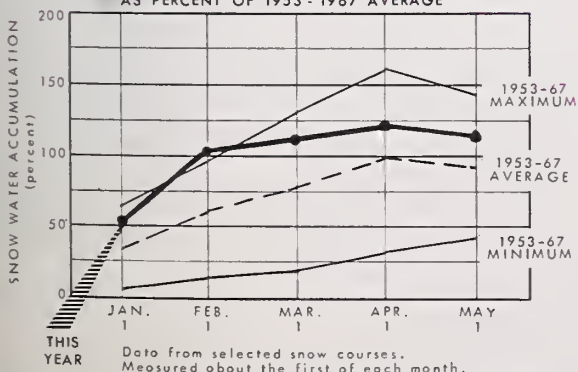
- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⚡ Rodia Telemetry
- L Precipitation Gage
- 9 Temperature Gage



10 0 10 20 30
SCALE IN MILES



SNOW WATER ACCUMULATION IN AREA 8 AS PERCENT OF 1953-1967 AVERAGE



Willamette Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Cascade Summit	4880	4/28	66	30.7	7.7	25.3
Champion	4500	4/30	77	37.7	1.2	26.3 h
Clackamas Lake	3400	c				
Clear Lake	3500	4/29	35	15.7	0.0	4.8 h
Clear Lake (Experimental)	3500	4/29	39	17.6	0.0	12.4 h
Dead Horse Grade	3800	4/28	47	22.7	0.0	11.9 h
Detroit City	1610	5/1	0	0.0	0.0	0.0
Detroit Dam	1580	5/1	0	0.0	0.0	0.0
Golden Curry Creek	3136	4/30	0	0.0	0.0	3.1 m
Hogg Pass	4755	5/1	103	49.1	20.2	41.6
Layng Creek	1200	4/30	0	0.0	0.0	0.0 m
Lost Creek Ranch	1956	4/28	0	0.0	0.0	0.0 h
Lund Park	1740	4/30	0	0.0	0.0	0.0 h
Marion Forks	2730	5/1	29	13.9	0.0	3.5 h
Marys Peak	3620	4/28	58	28.6	0.5	7.4 m
McCredie Springs	2120	4/28	0	0.0	0.0	0.0
McKenzie	4800	4/28	107	54.5	20.0	45.2 h
McKenzie Bridge	1372	4/28	0	0.0	0.0	0.0 h
Meridian Dam	750	4/28	0	0.0	0.0	0.0
Mill City	826	5/1	0	0.0	0.0	0.0
Oakridge	1310	4/28	0	0.0	0.0	0.0
Peavine Ridge	3500	4/25	54	25.1	- -	13.9 h
Phlox Point	5400	4/29	150	72.9	31.6	65.6
Railroad Overpass	2750	4/28	0	0.0	0.0	T
Salt Creek Falls	4000	4/28	40	18.0	0.0	10.2
Santian Junction	3990	5/1	37	18.7	0.0	12.1
Still Creek	3670	4/29	72	33.0	3.0	19.0
Timothy Lake	3295	5/1	29	13.1	- -	8.2 m
Vida	800	4/28	0	0.0	0.0	0.0 h
Waldo Lake	5500	b			15.5	- -
Weaver Creek	2440	4/30	0	0.0	0.0	0.0 m
White Branch Slide	2800	4/28	T	T	0.0	1.1 h
Whitewater Bridge	2175	5/1	0	0.0	0.0	T
Willamette Pass	5600	4/28	94	46.6	26.3	42.4

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of
MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Average to above average water supplies are in prospect for water users in the Rogue-Umpqua watersheds for the spring and summer of 1969.

SNOW COVER

Above normal temperatures the last week in March and first week of April melted most of the low and median elevation snow with about 127 percent of the normal snowpack remaining at the higher elevations.

PRECIPITATION

The U. S. Weather Bureau reported the precipitation for April was 94 percent of normal.

RESERVOIR STORAGE

Emigrant Lake, Howard Prairie and Hyatt Prairie Reservoirs held a total of 93,600 a.f. compared with a May 1 average of 91,000 acre feet. Fish Lake, with a May 1 average of 6,400 a.f., contained 4,100 acre feet. Fourmile Lake held 5,400 a.f. compared with an average of 11,800 acre feet. These reservoirs, with the exception of Fourmile Lake, should fill.

STREAMFLOW

Selected streamflow forecasts for the Rogue and Umpqua Basins are as follows:

<u>Stream Station</u>	<u>Forecast Period</u>	<u>Volume In Acre Feet</u>	<u>Percent 1953-67 Average</u>
North Umpqua nr. Toketee Falls	Apr-Sept	180,000	102
Rogue at Raygold	May-Sept	719,000	105
Hyatt Reservoir net Inflow	May-Sept	3,000	125
Fourmile Lake net Inflow	Apr-Sept	8,800	214
Little Butte, N. Fk. at Fish Lk.	Apr-Sept	20,000	139
Little Butte, S. Fk. - Lake Cr.	Apr-July	55,000	116
Illinois River near Kerby	Apr-Sept	277,000	131

Grants Pass Irrigation District should not have to go on canal alternation this year if average temperatures and precipitation prevail until the end of the forecast period.

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Excellent	Average
Applegate River, Big	Excellent	Average
Applegate River, Little	Excellent	Average
Ashland Creek	Excellent	Average
Butte Creek, Big	Excellent	Average
Butte Creek, Little	Excellent	Average
Cow Creek	Excellent	Average
Deer Creek	Excellent	Average
Elk Creek	Excellent	Average
Emigrant Creek (abv. Res.)	Excellent	Average
Evans Creek	Average	Average
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Excellent	Average
Illinois River, East Fork	Excellent	Average
Illinois River, West Fork	Excellent	Average
Jump-off-Joe Creek	Excellent	Average
Neil Creek	Excellent	Average
Red Blanket Creek	Excellent	Average
Rogue River	Average	Average
Sucker Creek	Excellent	Average
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Excellent	Average
Wagner Creek	Excellent	Average
Williams Creek	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Emigrant Lake*	39.0	38.6	31.9	36.7
Fish Lake	7.8	4.1	3.9	6.4
Fourmile Lake	16.1	5.4	5.7	11.8
Howard Prairie	60.0	41.4	42.9	40.1 ^m
Hyatt Prairie	16.1	13.6	11.4	14.2
*Average for years of record (in base period) after reconstruction.				

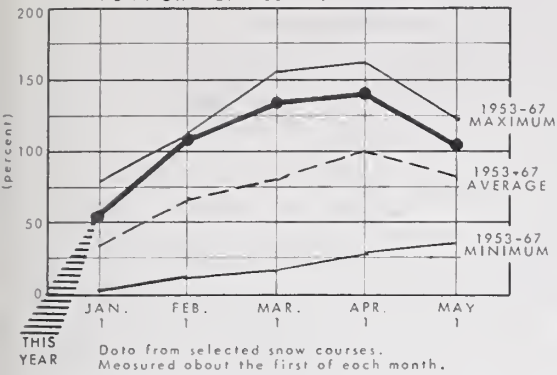
STREAMFLOW FORECASTS^a (1,000 Ac. Ft.)

as of May 1, 1969

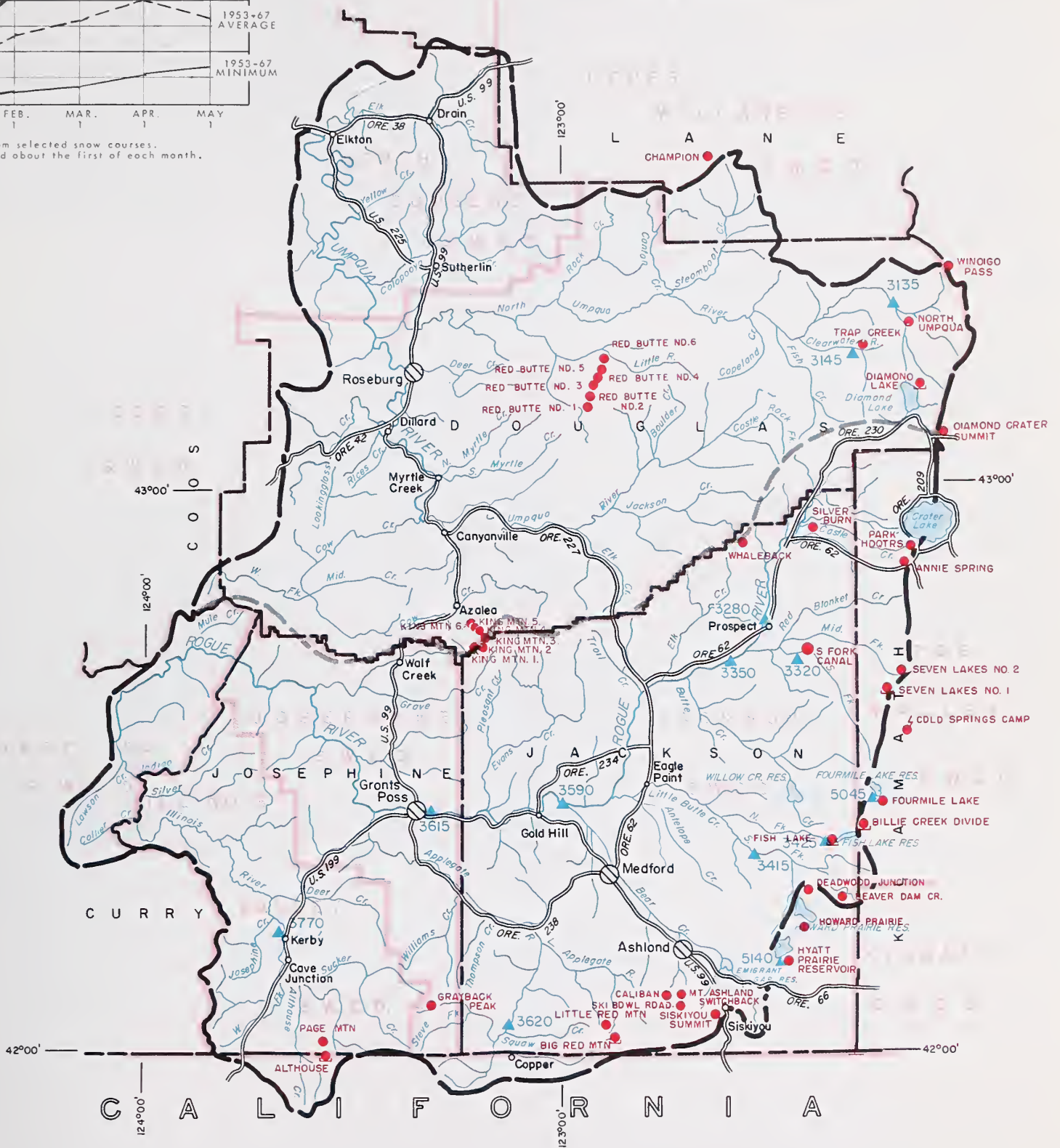
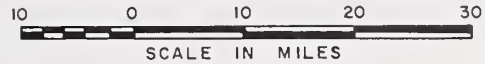
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3620	Applegate near Copper	202	April-Sept.	140	144
3145	Clearwater above Trap Creek ^d	60	May-Sept.	60	100
5045	Fourmile Lake net Inflow ^d	8.8	April-Sept.	4.1	214
5140	Hyatt Reservoir net Inflow ^d	3.0	May-Sept.	2.4	125
3771	Illinois River near Kerby	273	April-July	205	133
		277	April-Sept.	211	131
3425	Little Butte, N. Fk. at Fish Lake nr. Lake Cr. ^d	20	April-Sept.	14.4	139
3415	Little Butte, S. Fk. near Lake Creek	55	April-July	33	116
	Note: Minimum flow will drop to 100 c.f.s. by June 10.				
3280	Rogue above Prospect	229	May-July	192	119
		272	May-Sept.	249	109
3320	Rogue, South Fork near Prospect ^d	49	May-July	46	106
		55	May-Sept.	57	96
3350	Rogue River below South Fork	458	May-July	413	111
		594	May-Sept.	551	108
3590	Rogue at Raygold near Central Point	559	May-July	525	106
		719	May-Sept.	685	105
3615	Rogue at Grants Pass	662	May-Sept.	662	100
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	180	April-Sept.	176	102

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

SNOW WATER ACCUMULATION IN AREA 9 AS PERCENT OF 1953-1967 AVERAGE



ROGUE, UMPQUA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⌋ Precipitation Gage
- ⚡ Radio Telemetry

Rogue, Umpqua Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Althouse	4530	c				
Annie Spring	6018	4/29	104	53.5	25.7	43.1
Beaver Dam Creek	5100	c			0.0	- -
Big Red Mountain	6500	c				
Billie Creek Divide	5300	4/30	44	22.7	0.0	13.9 ^h
Caliban	6500	4/28	92	42.0	29.7	- -
Champion	4500	4/30	77	37.7	1.2	26.3 ^h
Cold Springs Camp	6100	4/22	83	41.5	14.1	- -
Deadwood Junction	4600	5/5	0	0.0	0.0	- -
Diamond-Crater Summit	5800	4/23	79	37.0	16.9	36.1 ^h
Diamond Lake	5315	4/23	46	21.8	8.3	16.8
Fish Lake	4865	4/30	31	14.6	- -	5.1 ^m
Fourmile Lake	6000	4/30	56	27.8	- -	21.6 ^h
Grayback Peak	6000	c				
Howard Prairie	4500	5/5	0	0.0	0.0	- -
Hyatt Prairie Reservoir	4900	c			0.0	- -
King Mountain #1	4500	4/28	14	7.4	0.0	- -
King Mountain #2	4000	4/28	8	3.6	0.0	- -
King Mountain #3	3648	4/28	0	0.0	0.0	- -
King Mountain #4	3049	4/28	0	0.0	0.0	- -
King Mountain #5	2380	4/28	0	0.0	0.0	- -
King Mountain #6	1820	4/28	0	0.0	0.0	- -
Little Red Mountain	6500	c				
Mt. Ashland Switchback	6400	4/28	86	38.2	31.0	- -
Mule Creek*	3680	4/30	4	1.9	- -	- -
North Umpqua	4215	4/29	7	3.4	0.0	5.3 ^h
Page Mountain	4045	c				
Park Headquarters	6450	4/29	139	68.4	39.3	59.1
Red Butte #1	4560	4/28	44	22.8	0.0	12.6 ^h
Red Butte #2	4000	4/28	14	6.8	0.0	3.7 ^h
Red Butte #3	3500	4/28	0	0.0	0.0	1.2 ^h
Red Butte #4	3000	4/28	0	0.0	0.0	0.0 ^m
Red Butte #5	2500	4/28	0	0.0	0.0	0.0 ^m
Red Butte #6	2000	4/28	0	0.0	0.0	0.0 ^m
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
Silver Burn	3720	4/29	18	9.2	0.0	3.0 ^h
Siskiyou Summit	4630	c				
Ski Bowl Road	6000	4/28	59	26.8	14.7	- -
South Fork Canal	3500	4/29	0	0.0	0.0	0.0 ^m
Trap Creek	3800	4/29	9	4.3	0.0	5.4 ^h
Whaleback	5140	c				
Windigo Pass	5800	4/29	88	42.2	21.6	44.0

*New snow course.

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Excellent water supplies are in prospect for Klamath Basin water users during the spring of 1969 with average supplies available for late summer.

SNOW COVER

Very little is left of the low elevation snowpack as the result of above normal temperatures during the last week in March and the first week in April. The snowpack was 134 percent of normal on May 1 compared to 146 percent of average on April 1.

PRECIPITATION

The Klamath watersheds received 72 percent of normal precipitation during April as reported by the U. S. Weather Bureau.

SOIL MOISTURE

Mountain watershed soils are at or near available water holding capacity and will facilitate runoff from spring rains.

RESERVOIR STORAGE

Because of heavy April streamflow from the melting snow, water stored in reservoirs in the area is at above average levels for this time of year. Upper Klamath Lake holds 555,700 acre feet with an average of 519,200 acre feet. Gerber Reservoir contains 90,400 acre feet compared to an average of 65,500. Clear Lake, with an average of 266,500 acre feet, is holding 329,600 acre feet.

STREAMFLOW

Forecasts of streamflow for the Klamath Basin are as follows:

<u>Station</u>	<u>Period</u>	<u>Volume (a.f.)</u>	<u>Percent 1953-67 Avg.</u>
Clear Lake Reservoir Inflow	May-Sept	20,000	132
Gerber Reservoir Inflow	May-Sept	9,000	180
Sprague River nr. Chiloquin	May-Sept	177,000	85
Inflow to Upper Klamath Lk.	May-Sept	420,000	109
Williamson R. below Sprague	May-Sept	340,000	103

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Excellent	Average
Lost River (Clear Lake)	Excellent	Average
Lost River (Gerber)	Excellent	Average
Lost River (Willow Res.)	Excellent	Average
Sprague River	Excellent	Average
Upper Klamath Lake	Excellent	Average
Williamson River	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Clear Lake	440.2	329.6	207.9	266.5
Gerber	94.0	90.4	56.7	65.5
Upper Klamath Lake	584.0	555.7	440.3	519.2

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.)

as of May 1, 1969

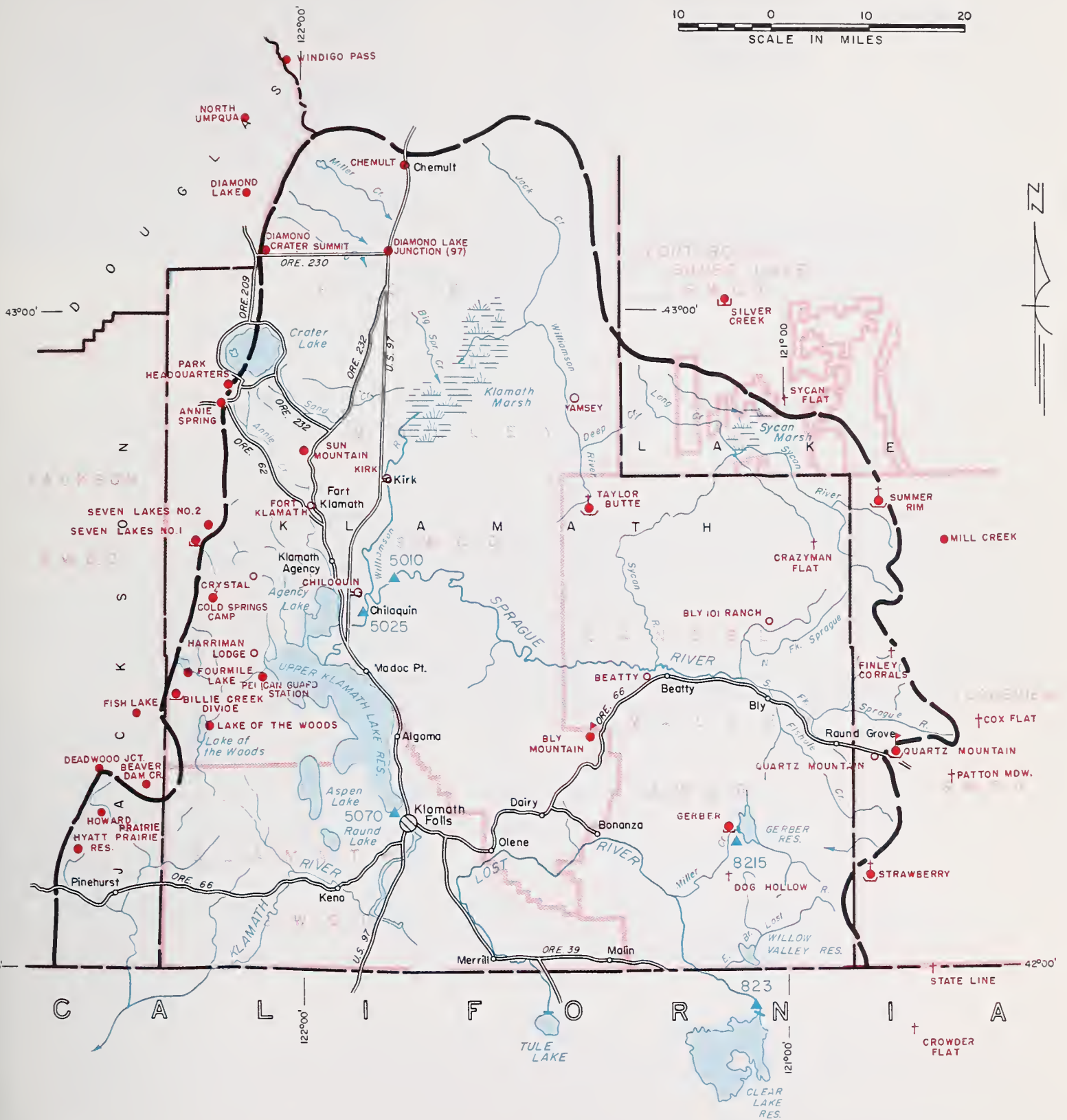
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
823	Clear Lake Reservoir Inflow	20	May-Sept.	15.1	132
8215	Gerber Reservoir Inflow	9.0	May-Sept.	5.0	180
5010	Sprague near Chiloquin	177	May-Sept.	208	85
5070	Upper Klamath Lake net Inflow ^k	420	May-Sept.	386	109
5025	Williamson below Sprague River	340	May-Sept.	331	103

SOIL MOISTURE

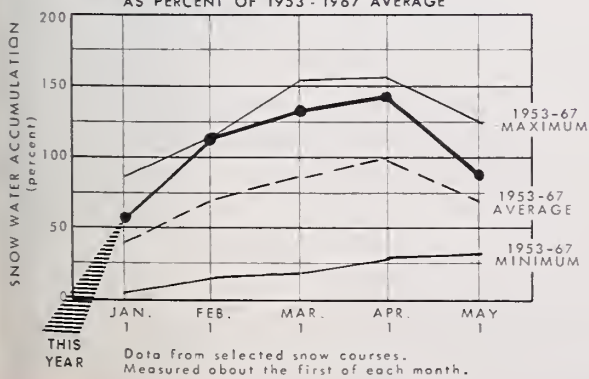
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bly Mountain	5090	42	14.0	5/1	12.8	11.4	12.4

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10
AS PERCENT OF 1953-1967 AVERAGE



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- ... Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- PP&L Snow Station
- ▼ Soil Moisture Station
- ⊥ Precipitation Gage
- ⚡ Radio Telemetry

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Annie Spring	6018	4/29	104	53.5	25.7	43.1
Beatty (PP&L)	4300	c				
Billie Creek Divide	5300	4/30	44	22.7	0.0	13.9 ^h
Bly Mountain	5090	4/30	0	0.0	0.0	1.0 ^m
Bly 101 Ranch (PP&L)	4800	c				
Chemult	4760	4/29	T	0.1	0.0	0.8 ^h
Chiloquin (PP&L)	4187	c				
Cold Springs Camp	6100	4/22	83	41.5	14.1	- -
Crazyman Flat ^e	6100	4/25	12	5.8	0.0	- -
Crowder Flat ^e (Calif.)	5200	c				
Crystal (PP&L)	4200	c				
Diamond-Crater Summit	5800	4/23	79	37.0	16.9	36.1 ^h
Diamond Lake Junction (97)	4600	4/23	0	0.0	0.0	0.0 ^h
Dog Hollow ^e	4900	c				
Finley Corrals ^e	6000	4/25	22	10.6	0.0	- -
Fort Klamath (PP&L)	4150	c				
Fourmile Lake	6000	4/30	56	27.8	- -	21.6 ^h
Gerber	4850	c				
Harriman (PP&L)	4200	c				
Hyatt Prairie Reservoir	4900	c			0.0	- -
Kirk (PP&L)	4533	c				
Lake of the Woods	4960	4/29	23	9.2	0.0	6.3 ^h
Park Headquarters	6450	4/29	139	68.4	39.3	59.1
Pelican Guard Station	5150	4/22	0	0.0	0.0	0.0 ^h
Quartz Mountain	5320	4/28	0	0.0	0.0	0.6 ^h
Quartz Mountain (PP&L)	5504	4/28	4	1.8	0.0	0.9 ^m
Seven Lakes #1	6800	c				
Seven Lakes #2	6200	c				
State Line ^e (Calif.)	5750	c				
Strawberry	5760	4/26	6	2.9	0.0	1.4 ^h
Summer Rim	7200	4/25	39	18.7	- -	- -
Sun Mountain	5350	5/2	52	25.3	8.6	- -
Sycan Flat ^e	5500	c				
Taylor Butte	5100	4/21	1	0.4	- -	- -
Yamsey (PP&L)	4600	c				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

MAY 1, 1969



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Lake County water users will have above average water supplies during the spring of 1969. Average supplies are in prospect for late summer.

SNOW COVER

Much of the low and midelevation snowpack was melted by the above normal temperatures that prevailed during the last week in March and the first week in April. Some melting has occurred at the higher elevations but the snowpack there is 161 percent of normal.

PRECIPITATION

The U. S. Weather Bureau reports that Lake County, Goose Lake watersheds received 71 percent of normal rainfall during the month of April.

SOIL MOISTURE

Soils in the mountain watersheds remain near their available water holding capacity.

RESERVOIR STORAGE

The Drews Reservoir was full and spilling water by April 12. Cottonwood Reservoir is holding 8,100 acre feet and will fill to capacity the first week in May. No report is available from Thompson Valley Reservoir.

STREAMFLOW

Flow of the smaller streams in the area reached a peak during the first two weeks of April, then tapered off as cool temperatures prevailed in the area. Selected streamflow forecasts are as follows:

<u>Station</u>	<u>Period</u>	<u>Volume Acre Feet</u>	<u>Percent of 1953-67 Average</u>
Chewaucan near Paisley	Apr-Sept	105,000	125
Deep above Adel	Apr-Sept	110,000	169
Drews Res. net Inflow	May-Sept	15,000	133
Twentymile near Adel	Apr-Sept	29,600	172
Honey Creek near Plush	Apr-Sept	24,500	152

Report prepared by

TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair"
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan River	Excellent	Average
Crooked Creek	Excellent	Average
Deep Creek	Excellent	Average
Dry Creek	Excellent	Average
East Side Goose Lake	Excellent	Average
Guano Lake	Excellent	Average
Honey Creek	Excellent	Average
Lakeview Water Users Assn.	Excellent	Average
Rock Creek (Hart Mtn.)	Excellent	Average
Silver-Buck Creeks	Excellent	Average
Summer Lake	Excellent	Average
Thomas Creek	Excellent	Average
Twentymile Creek	Excellent	Average
Warner Lakes	Excellent	Excellent

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE
Cottonwood*	8.7	8.1	3.6	5.8
Drews	63.0	63.5	50.3	54.3
Thompson Valley	19.5	b	13.7**	14.8
*Average for years of record (in base period) after reconstruction.				
**April 25, 1968.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3840	Chewaucan near Paisley	95	April-June	75	126
		105	April-Sept.	84	125
3715	Deep above Adel	105	April-June	61	172
		110	April-Sept.	65	169
3385	Drews Reservoir net Inflow d	15	May-Sept.	11.3	133
3785	Honey near Plush	20	April-June	15.4	130
		24.5	April-Sept.	16.1	152
3900	Silver Creek near Silver Lake	16.7	May-July	12.1	138
		19.0	May-Sept.	14.0	135
3660	Twentymile near Adel	27.7	April-June	16.3	170
		29.6	April-Sept.	17.2	172

SOIL MOISTURE

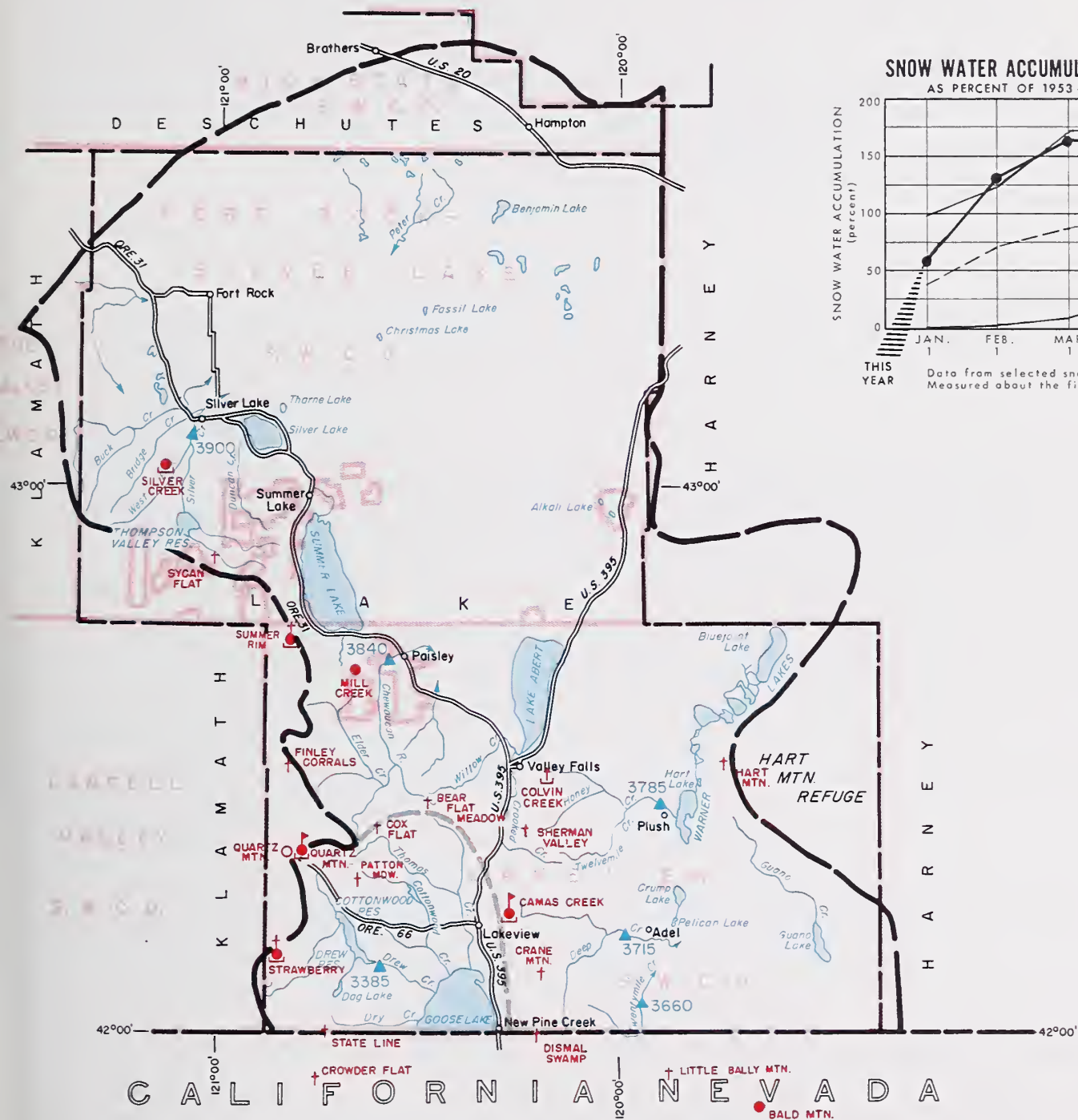
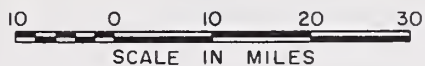
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
	NAME	ELEVATION					
	Camas Creek	5720	42	14.5	4/29	13.6	12.8
	Quartz Mountain	5320	48	15.3	4/28	9.8	8.6
							12.7
							9.8

SNOW

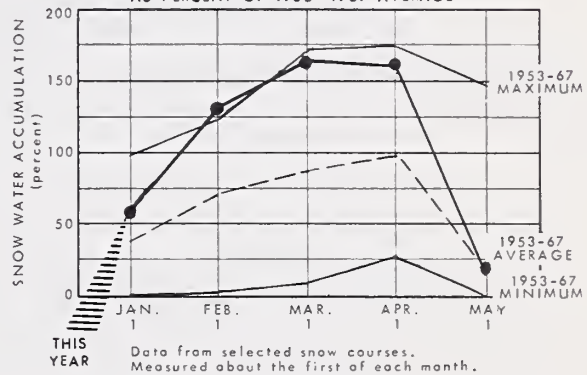
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Adin Mountain (Calif.)	6350	5/5	23	9.6	0.0	3.4
Bald Mountain (Nev.)	6720	c				
Bear Flat Meadow e	5900	c				
Camas Creek	5720	4/29	14	5.6	0.0	- -
Cedar Pass (Calif.)	7100	4/29	42	18.5	6.0	9.5
Colvin Creek e	6550	c				
Cox Flat e	5750	c				
Crane Mountain e	6020	c				
Crowder Flat e (Calif.)	5200	c				
Dismal Swamp e (Calif.)	7000	c				
Finley Corrals e	6000	4/25	22	10.6	0.0	- -
Hart Mountain e	6350	c				
Little Bally Mountain e (Nev.)	6600	c				
Mill Creek	6200	DISCONTINUED				
Patton Meadow e	6800	4/25	33	15.8	4.0	- -
Quartz Mountain (PP&L)	5504	4/28	4	1.8	0.0	0.9 m
Quartz Mountain	5320	4/28	0	0.0	0.0	0.6 h
Sherman Valley e	6600	c				
Silver Creek	4900	c				
State Line e (Calif.)	5750	c				
Strawberry	5760	4/26	6	2.9	0.0	1.4 h
Summer Rim	7200	4/25	39	18.7	- -	- -
Sycan Flat e	5500	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

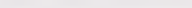
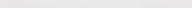








LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11
AS PERCENT OF 1953 - 1967 AVERAGE



LEGEND

- | | |
|---------------------------------------------------------------------------------------|----------------------------------|
|  | Watershed Boundary |
|  | Sub-watershed Boundary |
|  | Soil Conservation District Bdry. |
|  | County Boundary |
|  | Forecast Point |
|  | Snow Course |
|  | Aerial Snow Depth Gage |
|  | COPCO Snow Station |
|  | Soil Moisture Station |
|  | Precipitation Gage |



WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

MAY 1, 1969

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply prospects in the Harney Basin continue to be above average for the spring months but a rapid melt of most of the snowpack during the last week in March and the first week in April indicates supplies will probably be average to below average later in the summer.

SNOW COVER

Early April temperatures that were 1 to 5 degrees above normal melted about all of the low and median elevation snowpack. The snow cover was reduced from 145 percent of normal on April 1 to 42 percent of normal on May 1.

PRECIPITATION

Rainfall for the Harney Basin averaged 0.96 inch which is normal for the month of April according to the U. S. Weather Bureau.

SOIL MOISTURE

Mountain watershed soils are filled to near their water holding capacity.

STREAMFLOW

Most streams in the area reached a peak flow during the first two weeks of April and then tapered off as below normal temperatures prevailed during the latter part of the month. Forecasts of expected streamflow for the April-September period of 1969 are as follows:

<u>Stream Station</u>	<u>Volume Acre Feet</u>	<u>Percent of 1953-67 Average</u>
Donner und Blitzen near Frenchglen	90,000	164
*Silver near Riley	30,000	167
Silvies near Burns	160,000	127
Trout Creek near Denio	16,800	224

*April-July

Report prepared by
TOM GEORGE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Excellent	Average
Cow Creek	Excellent	Average
Donner und Blitzen River	Excellent	Average
Mill-Coffeepot Creeks	Excellent	Average
Rattlesnake Creek	Excellent	Average
Silver Creek	Excellent	Average
Silvies River	Excellent	Average
Soldier-Prather Creek	Excellent	Average
Trout Creek	Excellent	Average
Whitehorse Creek	Excellent	Average

RESERVOIR STORAGE (1,000 Ac. Ft.)

May 1, 1969

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1953-1967 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.)

as of May 1, 1969

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1953-67 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	75	April-June	46	164
		90	April-Sept.	55	164
4030	Silver near Riley	30	April-July	17.9	167
3935	Silvies near Burns	103	April-June	79	130
		160	April-Sept.	83	127
4065	Trout near Denio	14.4	April-June	6.5	222
		16.8	April-Sept.	7.5	224

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Spring	5900	42	16.9	4/28	12.5	12.9	12.1
Fish Creek	7900	48	15.0	c			
Folly Farm	4450	30	12.5	c			
Silvies	6900	48	16.4	3/27	15.3 ^f	13.7 ^f	14.5 ^f
Snow Mountain	6300	48	16.7	3/25	14.8 ^f	12.2 ^f	15.5 ^f
Starr Ridge	5150	36	10.6	4/30	10.6	10.5	10.5
Stinking Water	4800	48	21.9	4/28	21.9	- -	- -
Willow-Bald	5000	24	6.6	4/28	6.6	4.2	6.6

SNOW

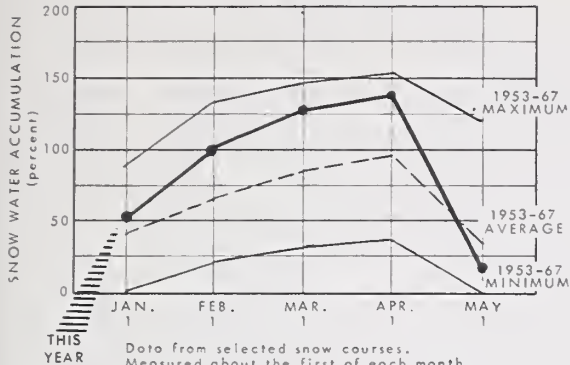
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1953-1967 AVERAGE
Blue Mountain Springs	5900	4/28	11	5.0	0.0	8.4 ^h
Buck Pasture	5700	c				
Buckskin Lake	5200	c				
Call Meadows	5340	c				
Crow Camp	5500	c				
Delintment Lake	5600	c				
Denio Creek	6000	c				
Disaster Peak (Nev.)	6500	c				
Emigrant Butte	5000	c				
Fish Creek	7900	c				
Hart Mountain	6350	c				
Idlewild Camp	5200	5/1	0	0.0	0.0	0.9
Izee Summit	5293	4/30	0	0.0	0.0	1.9 ^m
Lake Creek	5120	c				
Oregon Canyon	6950	c				
Rock Spring	5100	5/1	0	0.0	0.0	0.4 ^m
Silvies	6900	c				
Snow Mountain	6300	c				
Starr Ridge	5150	4/30	0	0.0	0.0	0.6 ^h
Stinking Water	4800	4/28	0	0.0	- -	- -
Trout Creek	7800	c				
"V" Lake	6600	c				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

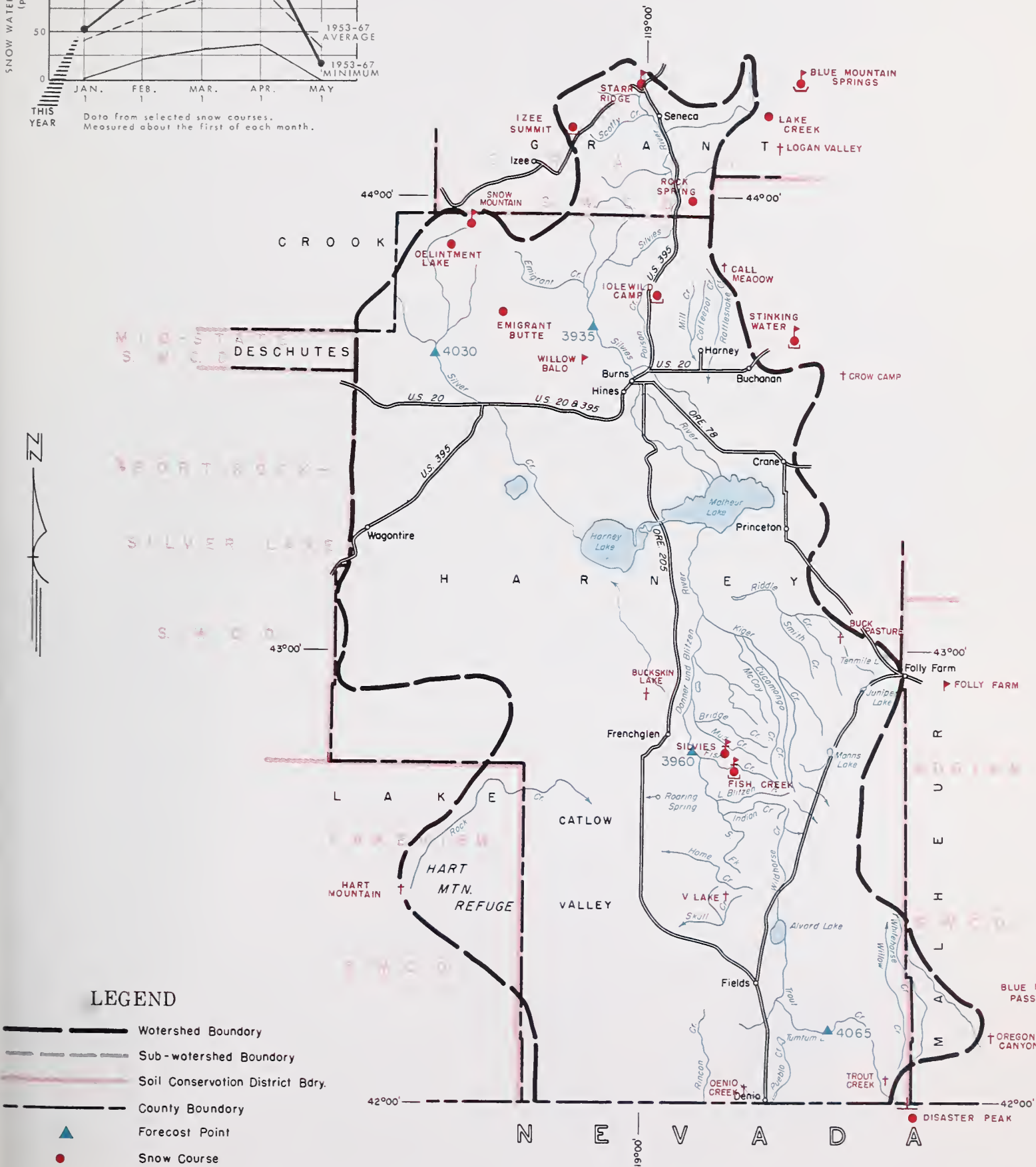
HARNEY BASIN WATERSHEDS

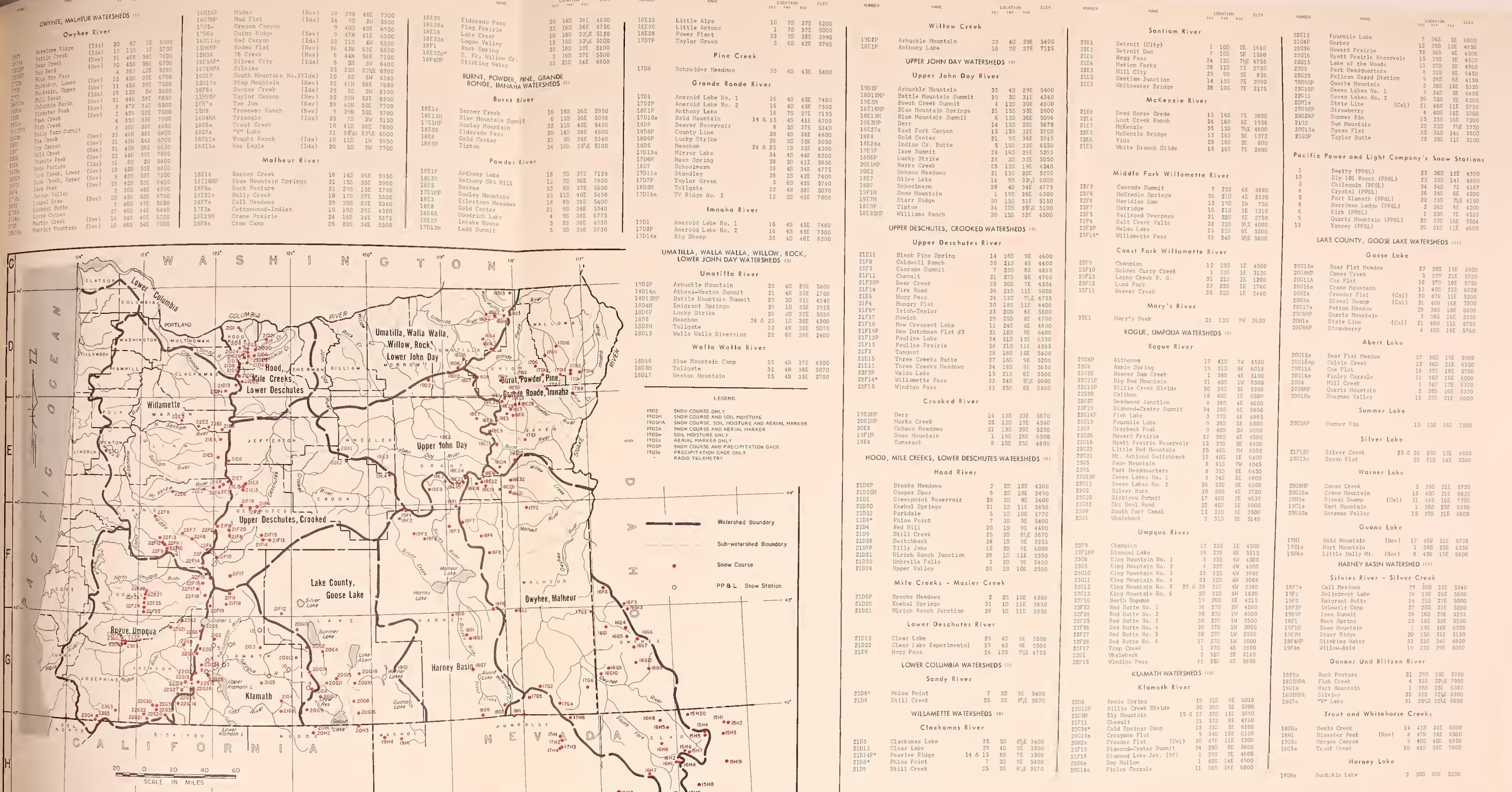
SNOW WATER ACCUMULATION IN AREA 12

AS PERCENT OF 1953-1967 AVERAGE



10 0 10 20 30
SCALE IN MILES





Map and Index to OREGON SNOW COURSES

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

OFFICIAL BUSINESS

U. S. DEPARTMENT OF AGRICULTURE
POSTAGE AND FEES PAID

FIRST CLASS MAIL

**FEDERAL - STATE - PRIVATE
COOPERATIVE SNOW SURVEYS**

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*